71595

TRIAL COURT NO. 612408

APPELLATE COURT NO. _____

IN THE COURT OF CRIMINAL APPEALS

OF THE STATE OF TEXAS

AT AUSTIN

RICK ALLAN RHOADES,

Appellant

VS.

THE STATE OF TEXAS,

Appellee.

APPEAL FROM 179TH DISTRICT COURT OF HARRIS COUNTY, TEXAS

Judge J. Michael Wilkinson Presiding

STATEMENT OF FACTS

EXHIBITS ONLY

VOLUME 38 OF 40 VOLUMES

Marlene Swope
Official Court Reporter
301 San Jacinto
Houston, Texas 77002

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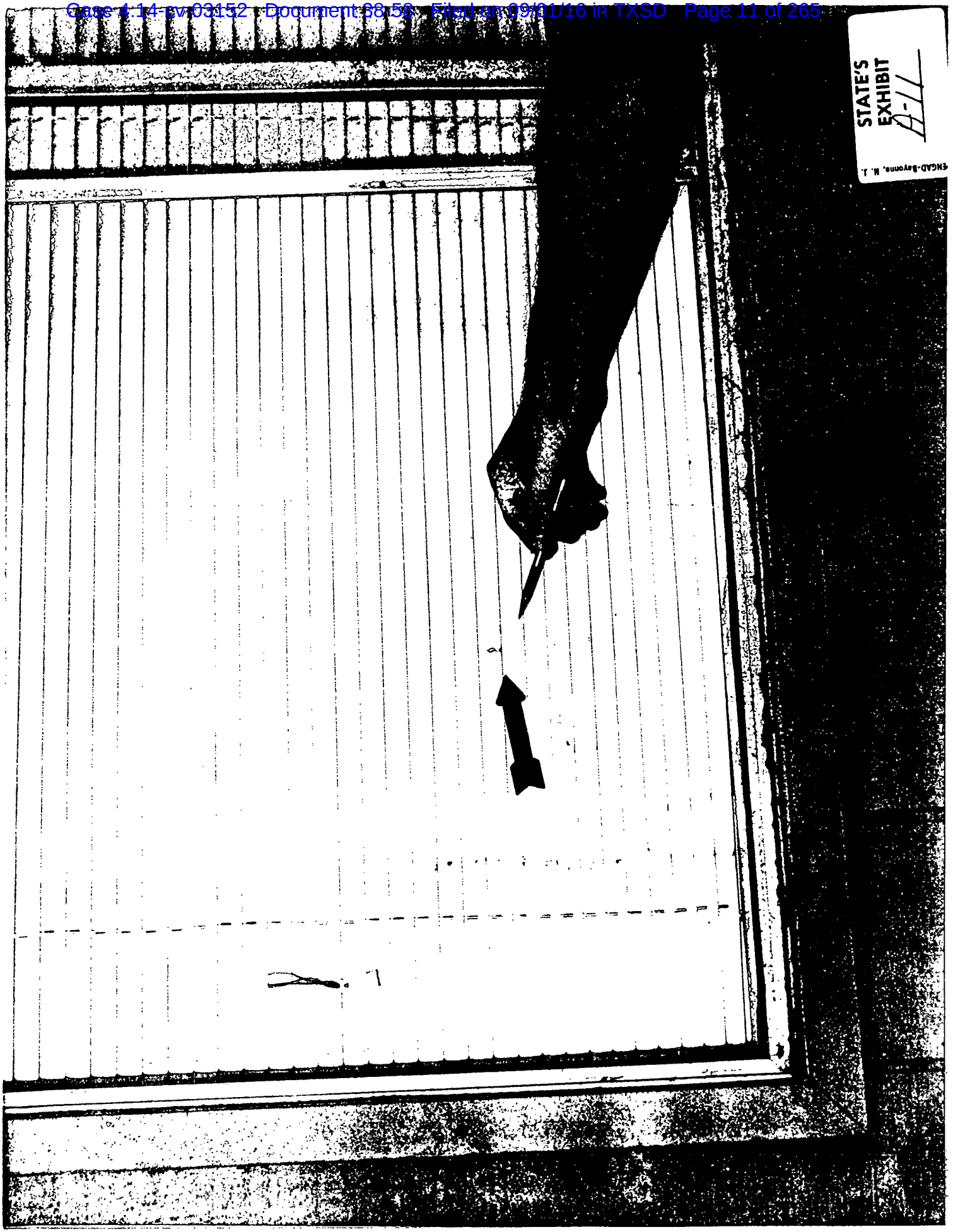
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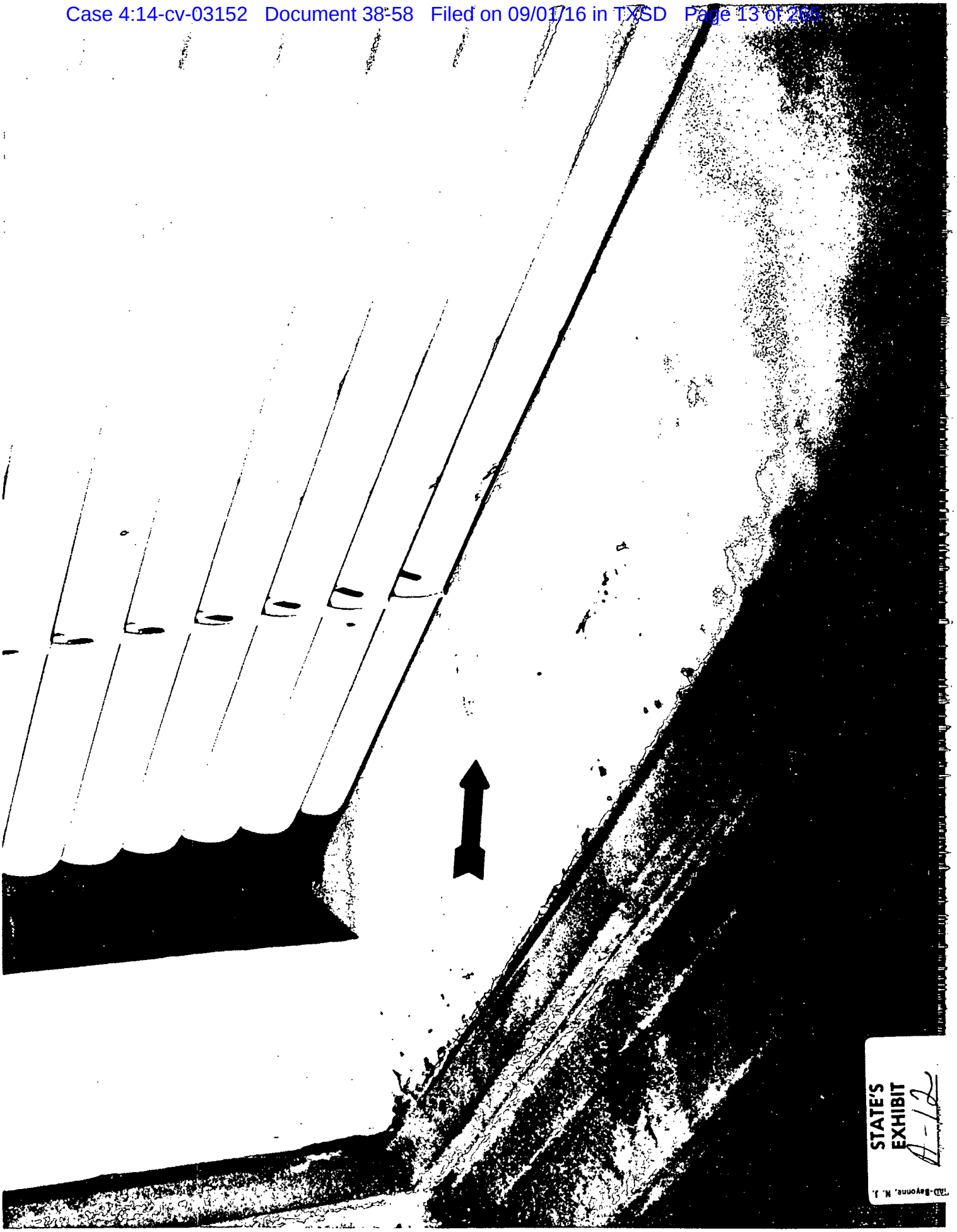

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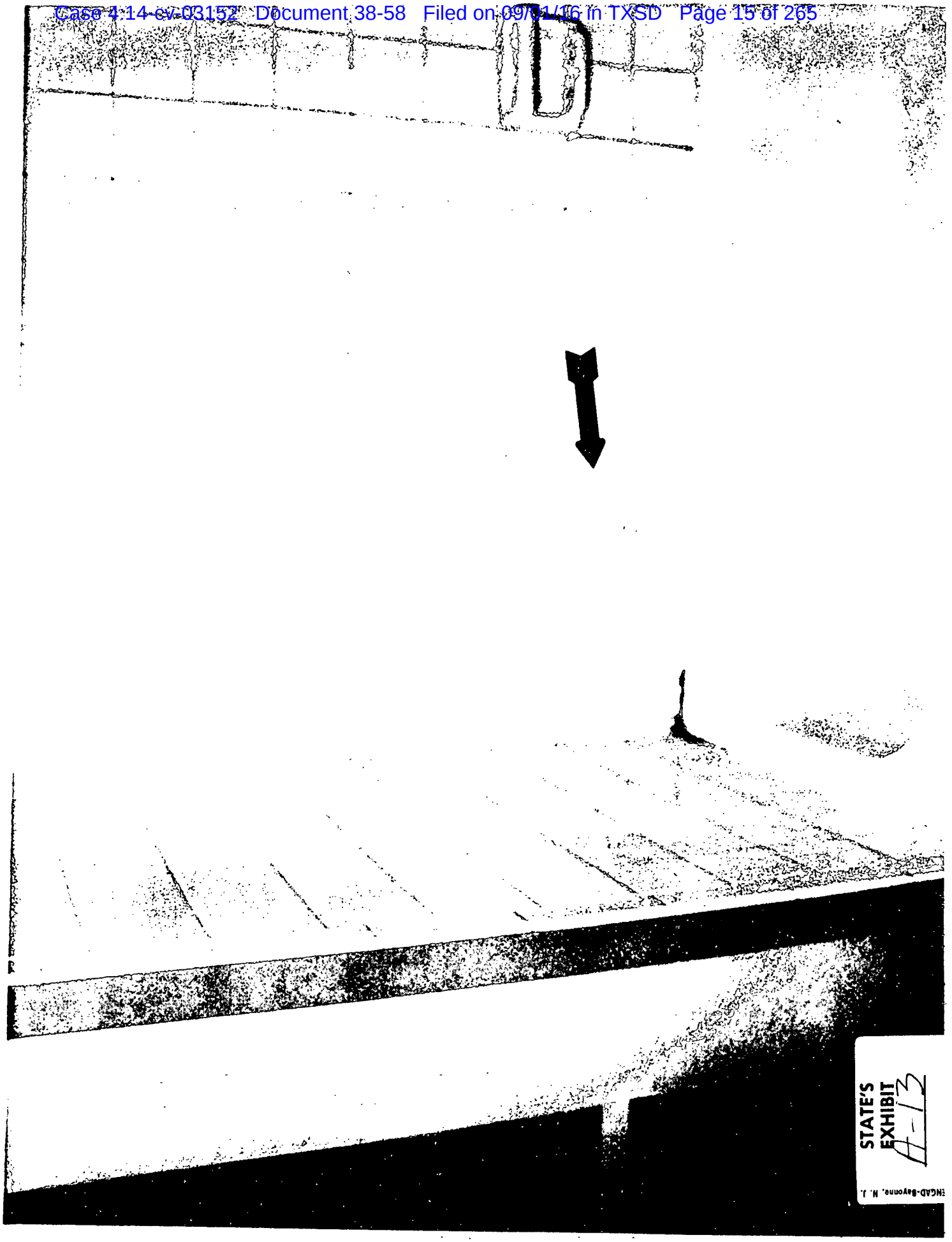
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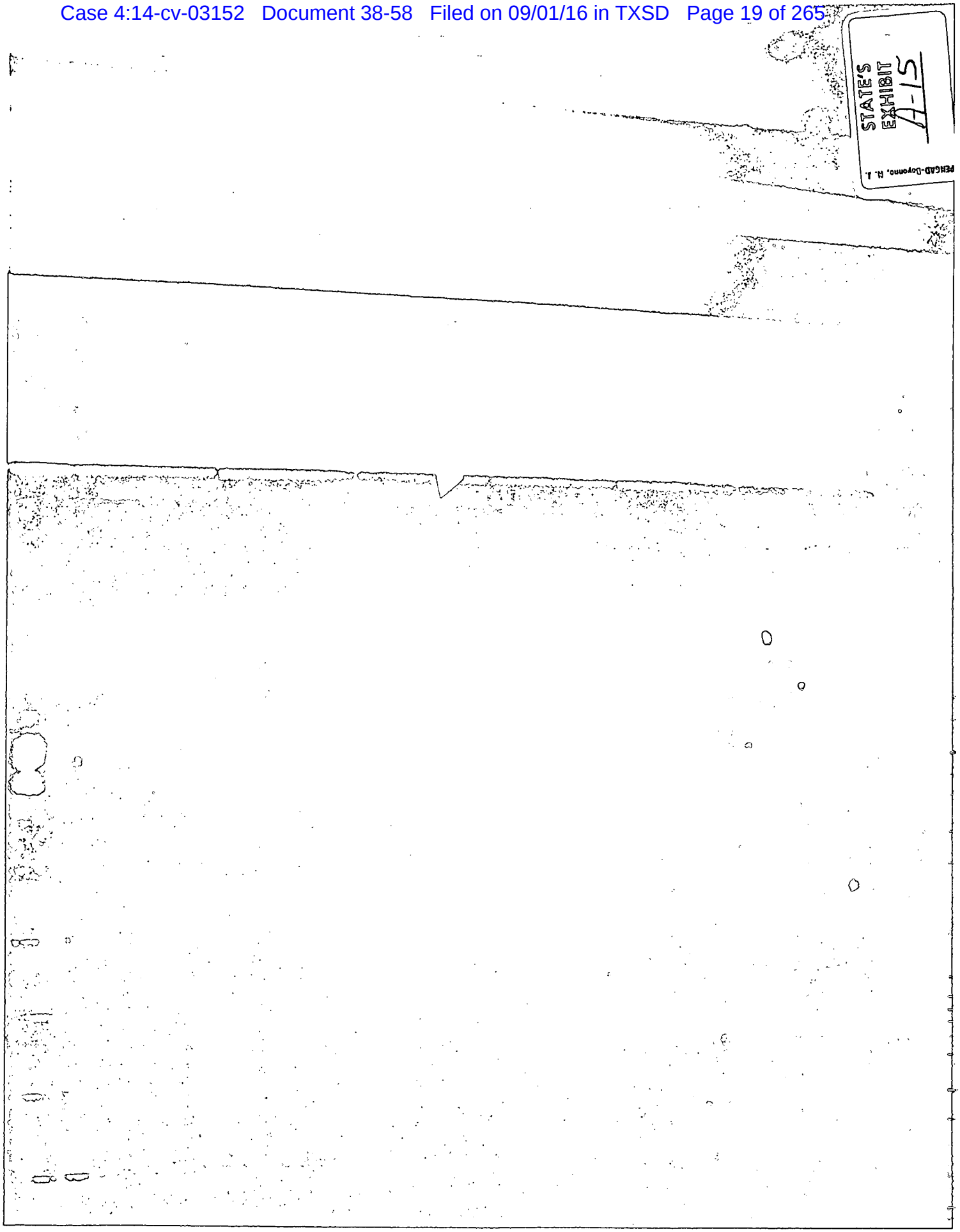
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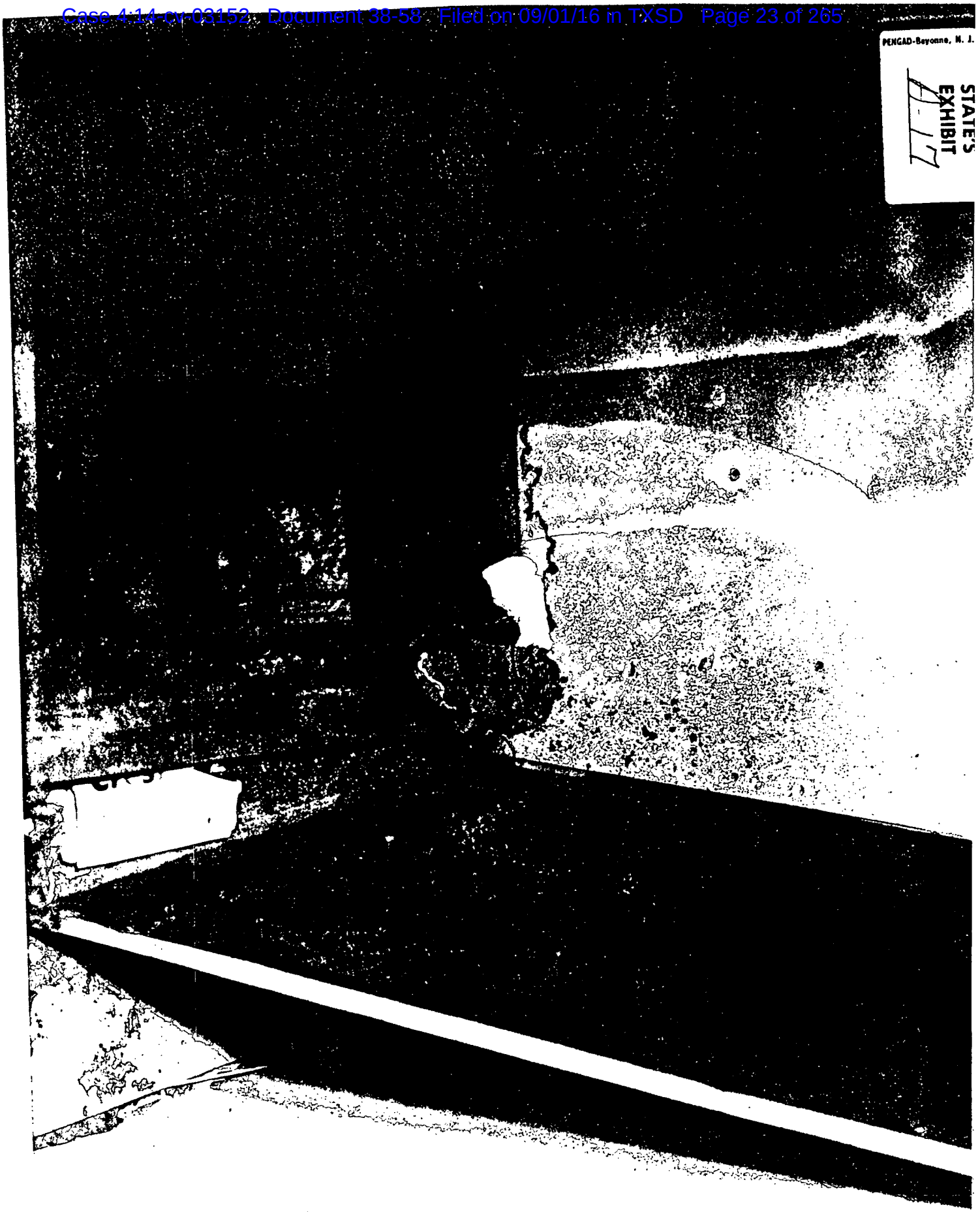
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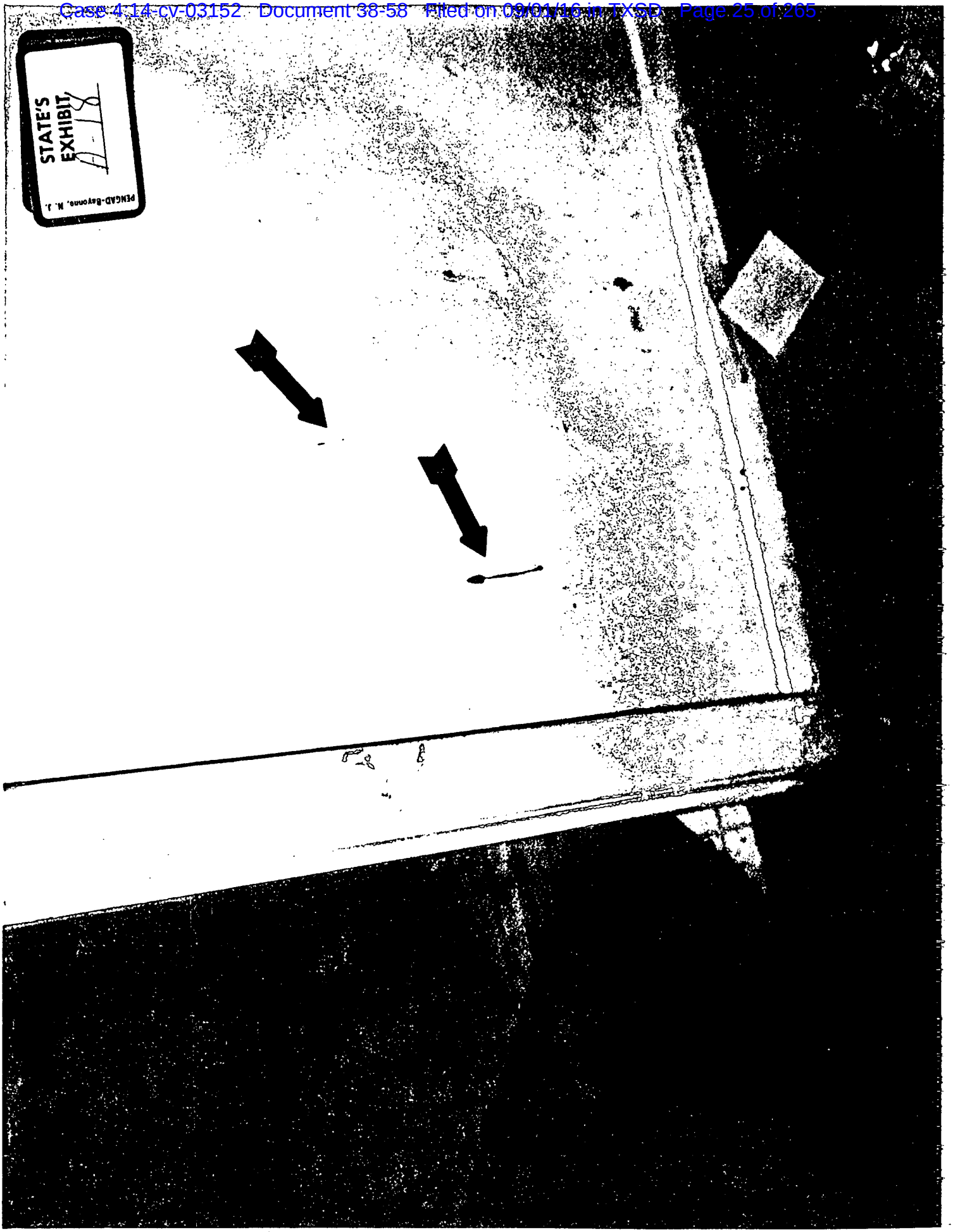
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DEFENDANT'S EXHIBIT 1 PRE-TRIAL

Houston Chronicle
Section A, Page 27 ★★★
Friday, Aug. 28, 1992

METROPOLITAN

Local & State

Editorials, 30A
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DEFENDANT'S EXHIBIT

McDuff case moved to cit

Former death row inmate to be tried Jan. 11

By JOHN MAKEIG
Houston Chronicle

One of Texas' most notorious murder defendants, former death row inmate Kenneth McDuff, will be tried in Houston on capital murder charges in the deaths of a Waco convenience store clerk and a prostitute.

State District Judge George Allen in Waco agreed to move the trial to the court of state District Judge Bob Burdette in Houston because of extensive publicity.

One example is the August issue of *Texas Monthly*, which has McDuff's face on the cover with the word "Monster" across his forehead.

The larger pool of potential jurors in Houston makes it more likely to find jurors unfamiliar with the case.

Burdette, a former prosecutor in McLennan County, said the trial will begin Jan. 11.

McDuff, 46, is a suspect in several Central Texas killings since he was paroled from prison in 1989, but he's only under indictment in the two 1992 McLennan County deaths.

The case coming to trial accuses McDuff of kidnapping, robbing and murdering clerk Melissa Northrup, and also killing prostitute Valencia Kay Joshua.

Crawford Long, McLennan County first assistant district attorney, wouldn't provide details on either case, citing a gag order issued by Allen.

But news accounts say McDuff had worked at the same Quik-Pak convenience store as Northrup, 22, who was pregnant with her third child when she disappeared March 1.

Her body was found about two months later, floating in a gravel pit in Dallas County.

Joshua lived on the Texas State Technical College campus in Waco, where McDuff also lived after enrolling there in early 1991.

She disappeared Feb. 24, and her body was found in a shallow grave on the campus not long after Northrup disappeared.

Another case where authorities suspect McDuff is the Dec. 29, 1991, disappearance of an Austin accountant, Colleen Reed, 28, who may have been slain in Bell County. No trace of her body has been found.

Last April one of McDuff's friends, Alva Hank Worley, 34, told Bell County officers that he was with the ex-convict during the abduction of

See MCDUFF on Page 33A.

Associated Press

Accused killer Kenneth Allen McDuff went before a Waco state district judge on Thursday.

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McDuff

Continued from Page 27A.

Reed in Travis County.

McDuff was arrested May 4 in Kansas City, just three days after his story was featured on the television program *America's Most Wanted*.

The son of a cement finisher in Temple, McDuff was sentenced to death for the 1966 killings of 16-year-old girl and two boys, ages 15 and 17, in the Fort Worth suburb of Everman.

All three were robbed and then abducted at gunpoint to a remote area. The two boys were shot to death in the trunk of a car before the girl was raped and strangled.

McDuff spent six years on death row before the U.S. Supreme Court in 1972 ruled the death penalty unconstitutional.

His sentence was commuted to life, and he remained in prison until 1989, when he was freed by the Texas Board of Pardons and Paroles.

The decision provoked a huge outcry after he was linked to the McLennan County cases.

When the board decided to release him, it only took the approval of a three-member panel of parole board members.

Now, for cases of capital killers like McDuff whose death penalties were commuted to life, it takes the approval of the entire 18-member board.

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DEFENSE EXHIBIT A

CRIMINAL JUSTICE AND BEHAVIOR seeks to examine the behavioral, psychological, and interactional foundations of clientele and employees in the criminal justice system. The journal will strive to present information on processes of law violation, deterrence, behavior change and functioning of systems, groups and individuals. Articles are desired which describe original research in these areas, theoretical aspects, and developments of innovative programs and practices.

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PERGAD-Beyonne, N. J. DEFENDANT'S EXHIBIT

THE PREDICTION OF DANGEROUS BEHAVIOR

EDWIN I. MEGARGEE
Florida State University

Error is inevitable whenever psychologists attempt to predict future behavior. This paper examines the steps involved and the factors to be considered in the prediction of behavior in general and dangerous behavior in particular. Errors can occur in identifying the relevant personality and situational variables to sample, assessing these variables, and determining their interaction. The effects of these errors are multiplied by the fact that violence is a low base-rate phenomenon. The consequences of errors in violence prediction are examined and the ethical problems and social policy implications discussed.

At no time has the prediction of dangerous behavior been of greater concern to mental health professionals and society at large. In addition to the natural concern over preventing violence directed at public figures and ordinary citizens, the problem of predicting dangerous behavior is a common bridge

Author's Note: *This paper is based on papers delivered at the Second Annual Florida Symposium on Dangerousness, Gainesville, Florida, March 14, 1975 and the Fourth International Seminar on Comparative Clinical Criminology, Santa Margherita Ligure, Italy, April 29, 1975. Preparation was supported in part by USPHS Grant No. MH 13202; NIMH: Center for Studies of Crime and Delinquency. All statements and opinions expressed are those of the author and should not be construed as representing official policies, opinions, or attitudes of the Public Health Service. The author would like to thank Wally Kennedy and Jean Kling for their comments on an earlier draft as well as the suggestions for improvement by the anonymous reviewers, particularly Saleem Shah.*

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linking the civil and criminal law. As Dershowitz has pointed out, our society has always maintained a system of preventive confinement of potentially dangerous individuals by means of a number of legal strategies including involuntary commitment of the "dangerous" mentally ill individual, denial of bail, probation, or parole to the "dangerous" criminal offender, and confinement of juveniles, "vagrants," and "sexual psychopaths" who appear likely to engage in acts of violence (cited by Stone, 1975: 4). Indeed, one libertarian view is that such preventive confinement is the only justification for involuntary civil commitment. According to Stone (1975: 25),

> this progressive approach rejects the medical model, rejects the treatment rationale, and puts forward the narrow John Stuart Mill libertarian point of view, which suggests that in principle civil commitment can be continued if the State can justify the loss of liberty in light of its traditional police function. The emphasis on dangerousness as the salient variable is compatible with the modern jurisprudence of criminal law and is central to the sentencing premises of the American Law Institute Model Penal Code and the Model Sentencing Act. It is also a critical theme in the President's Commission on Law Enforcement and Administration of Justice.

It is easy to understand why Stone (1975: 25) concludes, "the generic concept of dangerousness has emerged as the paramount consideration in the law-mental health system."

How well do professionals predict dangerous behavior? The public at large, and law enforcement personnel and legislators in particular, apparently feel mental health personnel advise the release of too many potentially violent individuals to prey upon society. On the other hand, empirical data indicate that clinicians are more inclined to overpredict violence and classify an excessive number of people as dangerous (Monahan, 1975; Stone, 1975).

In either case, it is clear the prediction of dangerous behavior involves making errors. The purpose of this paper is to present a conceptual framework for examining the process of predicting dangerous behavior, indicating the points at which mistakes can occur, and explaining why such errors are inevitable. Secondly, it will address itself to the implications for social policy and decision making.

"DANGEROUSNESS" VS. DANGEROUS BEHAVIOR

In recent years it has become popular to refer to this problem as the assessment of "dangerousness." "Dangerousness" is an unfortunate term, for it implies there is a trait of "dangerousness" which, like intelligence, is a relatively constant characteristic of the person being assessed. However, the degree of danger an individual represents to himself or others varies markedly as a function of a number of variables. It is better to eschew the term "dangerousness" in favor of discussing the problems involved in "predicting dangerous behavior," to avoid the trap of affixing permanent labels on changeable people.

The term "dangerous behavior," which will be used interchangeably with "violence," will be applied to a relatively narrow range of acts characterized by the application or overt threat of force which is likely to result in injury to people. Although not all dangerous behavior is criminal (since the perpetrator may be lacking criminal intent) this use of the term includes, but is not restricted to, such criminal acts as homicide, mayhem, aggravated assault, forcible rape, battery, robbery, arson, and extortion. Criminal behavior not likely to result in injury to people, such as noncoercive thefts or vandalism, are excluded, as are business practices which, although injurious to people, do not involve the application of force.

BASIC PROBLEMS IN PREDICTING BEHAVIOR

When discussing the accuracy of public opinion polling, laymen intuitively understand that polling a small sample of people to estimate the future voting behavior of the electorate as a whole inevitably involves error. However, it is less often understood that the same problem plagues psychological assess-

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ment. Whenever a sample of behavior is used to estimate a larger behavior domain, whether we use high-school grades and CEEB scores to predict college achievement or case history data and personality tests to estimate the likelihood of dangerous behavior, some errors inevitably occur. Despite our best efforts we will recommend confining some people who, if left free, would not have injured anyone, and we will suggest releasing others who will subsequently engage in violence. (If our batting average is perfect for one type of decision, i.e., if none of our released clients ever harms anyone, then the odds are that we are making errors of the other type and confining too many who could have been set free.)

The basic question is how much error can be tolerated and whether more harm is done by predicting inaccurately or by not predicting at all. These value judgments will be considered when we discuss social policy implications. But first the processes involved in predicting dangerous behavior will be discussed to demonstrate why error is inescapable.

THE PROCESS OF PREDICTING DANGEROUS BEHAVIOR

IDENTIFYING THE RELEVANT VARIABLES

Although it is axiomatic that behavior is a function of both personality factors and situational variables [$B = (P \cdot S)$], psychologists typically focus on the former at the expense of the latter. But a recent series of experiments on the prediction of leadership showed that knowledge of both personality and situational variables was essential for accurate prediction (Fenelon and Megargee, 1971; Megargee, 1969; Megargee, Bogart and Anderson, 1966).

Personality factors. To predict dangerous behavior, the clinician must consider three broad classes of personality variables: *motivation, internal inhibitions, and habit strength.*

Before discussing motivation, or to use a more technical term, *instigation to aggression,* we should distinguish between what Buss (1961) termed "angry aggression" and "instrumental aggression." According to Buss, angry aggression is motivated by a conscious or unconscious desire to harm the victim and is reinforced by the victim's pain, whereas instrumental aggression is a means to some other end and is reinforced by the satisfaction of some other drive. Shooting someone you hate is an example of angry aggression; shooting someone in self-defense, in the line of duty, or to fulfill a "contract" would be examples of instrumental aggression. Of course, both types of motivation may be mixed, as in the case of an angry parent who spanks a child partly to help socialize that child and partly to ventilate his or her own feelings.

Instigation to aggression is the sum of both types of motivation and it is necessary to assess not only the degree of anger or hostility but also the extent to which dangerous behavior would be used by the client as a means to some other end. This is particularly true in such violent offenses as armed robbery and forcible rape, which may satisfy acquisitive or sexual drives, and gang fights, which usually satisfy needs for status, affiliation, and territory as well as hostility.

The assessment process is further complicated by the fact that *hostility* and *anger* must be evaluated. Hostility is a relatively enduring characteristic or trait, whereas anger or rage are transitory emotional states which are highly individualized and situation-specific. A client who manifests no anger during the assessment, even when deliberately provoked, may still act out on the street. Although some state-trait scales of anger and hostility have been devised (Vanderbeck, 1972), most are quite obvious and easily dissimulated. The vast majority of the psychometric devices available simply attempt to measure aggressive motivation (or worse yet, "aggressiveness") as though they were enduring traits (Megargee, 1970, Megargee and Menzies, 1971). The case history and interviews with family and friends are more useful in gauging the incidence of transitory

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states of rage and anger as well as in determining the likelihood that the client will encounter situations or conditions likely to elicit instigation to aggression.

Internal inhibitions or taboos against engaging in dangerous behavior have received less attention than instigation to aggression. However, they are equally important, because whenever the inhibitions against a response exceed the instigation the response will be suppressed or repressed. Unfortunately for predictors, inhibitions are probably even more specific than instigation. They differ from target to target. Mike LeFevre, a steel worker interviewed by Studs Terkel in *Working*, said, "all day I wanted to tell my foreman to go fuck himself, but I can't. So I find a guy in a tavern. To tell him that. And he tells me too. . . . He's punching me and I'm punching him, because we actually want to punch somebody else" (Terkel, 1974, p. xxxiii). Inhibitions also vary as a function of the act; although Mike LeFevre had few compunctions about hitting the other man, he refrained from using a knife. Distance from the target is yet another factor; a man who would be too inhibited to strangle one individual might well be able to bomb thousands. It is these differences in levels of inhibition as a function of victims and acts that account in part for the phenomena of displacement and response substitution.

Like instigation, inhibitions can vary over time. Moreover, they can be influenced chemically. The association between drinking and violence stems primarily from the fact that alcohol acts to anesthetize the brain areas that mediate inhibitions; chronic as well as acute brain syndromes can also lower inhibitions.

As if these variations in inhibitions did not pose enough problems for the would-be prognosticator, the situation has been further complicated by studies which have demonstrated that some extremely violent people are characterized by excessive inhibitions. In such individuals, suppressed instigation to aggression apparently summated to the point where the massive inhibitions were overwhelmed. (For reviews of these studies and the MMPI Overcontrolled-Hostility scale that helps identify such individuals, see Megargee, 1971, 1973.)

Perhaps because of this preoccupation with the chronically overcontrolled assaultive individual, who rarely if ever engages in even mildly aggressive behavior, the author in his previous theoretical writings has neglected a third personality variable which is probably just as important as instigation and inhibitions. This is *habit strength*, the extent to which aggressive responses have been reinforced in the past. An appraisal of habit strength is particularly important when attempting to determine whether an individual will attempt to satisfy his or her needs for sex, power, mastery, wealth, and the like by means of instrumental aggression and in the analysis of socially approved dangerous behavior by people such as policemen and military personnel.

Situational factors. The importance of situational factors has already been emphasized. These include immediate specific factors such as the availability of a weapon, the presence of onlookers, and the behavior of a potential victim, but more pervasive situational variables such as the level of frustration in the environment, or the social approval of violence in a particular subculture should also be considered.

Situational factors can either facilitate or impede dangerous behavior. A gun in the hand of an angry man can facilitate his committing an act of violence, but if, instead, the gun is in the hand of his potential victim, it is more likely to inhibit his dangerous behavior. One reason behavioral scientists can predict college achievement more accurately than dangerous behavior is that academia presents each student with standard situations and similar stimuli, whereas the situations and milieus to be confronted by mental patients and parolees in the community seem infinitely more variable.

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ASSESSING THE RELEVANT VARIABLES

Once the relevant variables have been identified, ways must be found to assess them. The discussion of instigation, inhibitions, habit strength, and situational factors indicated some of the problems involved in their measurement such as the transitory nature of emotional states such as anger, the specificity of both instigation and inhibitions, and the difficulty of obtaining adequate data pertaining to situational variables.

Most of the literature on the prediction of dangerous behavior focuses on the reliability and validity of personality assessment devices. Although many of these instruments can discriminate people who have engaged in dangerous behavior in the past from "normal" nonclinical groups, few, if any, can adequately differentiate violent from nonviolent criminals or patients (Megargee, 1970; Megargee and Cook, 1967; Megargee and Mendelsohn, 1962; Megargee and Menzies, 1971). Unfortunately, these are precisely the differentiations that practitioners who work in a correctional or mental health setting are usually called upon to make.

Moreover, even if the validity literature showed that our tests could accurately identify people who have been violent in the past, it would not necessarily mean these tests could predict who will behave dangerously in the future. The violent act itself may have created feelings of guilt or relieved pent-up hostility. Also, people who have been identified as having illegally engaged in such acts are inevitably exposed to a variety of judicial and correctional procedures expressly designed to change their personality structure and dynamics. And change they probably do, although the nature of these alterations may be quite different from what was intended.

Psychological tests are neat, efficient, and quantifiable, but they are not always the best samples of behavior for the prediction of violence. Telling a story about a scene depicted in a TAT card or answering a series of true-false questionnaire items are many steps removed from the dynamic interactions

that actually result in violence. Case histories are better indicators, but, as already noted, people do change. Institutional behavior may provide some useful data, but it is not infallible. An individual may refrain from violence for years in a facility with strong external controls, particularly if he is receiving chemotherapy and counseling, only to resume violent behavior in a less structured or supportive community setting. By the same token, a person who responded with violence to the peculiar stresses and demands of the institutional subculture might not behave dangerously on the street. Diagnostic role playing sessions in the institution coupled with furloughs might provide useful data. However, such informal assessment techniques are not standardized or quantifiable so it is difficult to determine their reliability or validity.

Whatever the behavior sample the clinician selects, it is no secret that the validity of our assessment techniques is less than perfect, and too often less than satisfactory (Megargee, 1966, 1970; Megargee and Menzies, 1971). The clinician can make errors in selecting the variables to assess, but even if he does this perfectly, he is likely to make errors in measuring these variables with the instruments currently available.

DETERMINING THE INTERACTION OF THE RELEVANT VARIABLES

It is not enough to select the correct variables and measure them accurately. Before making a prediction, one must determine how these variables interact. In effect, one must forecast the effects of a rapid internal algebra which determines the response potential for a given dangerous act relative to all other possible behaviors.

Based on the discussion thus far, it would appear, in theory at least, that we could add up the factors facilitating and impeding the expression of dangerous behavior and balance them against one another. One would take the sum of instigation to aggression against victim "x" (M_x), plus the past history of reinforcement (H), and the situational factors

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facilitating violence (S_f) and weigh them against the sum of the internal inhibitions against a particular dangerous act "a" against victim "x" ($I_{a.x}$) and the inhibitory situational factors (S_i).

If one did go through such a procedure and found that the inhibitions were stronger (i.e., $M_x + H + S_f < I_{a.x} + S_i$), then one could safely predict that dangerous behavior against that victim would not occur. (Of course, if the instigation was increased by one more provocation or the inhibitions decreased by one more beer, this balance could be shifted.)

On the other hand, finding that the factors favoring the completion of the dangerous act exceed those inhibiting it (i.e., $M_x + H + S_f > I_{a.x} + S_i$) does not mean that poor victim "x" will soon be on the receiving end of dangerous act "a." A predominance of factors favoring the particular response only means that it is *possible*, not that it will inevitably occur. At any given time a number of possible responses are competing for expression and the one actually selected depends upon their *relative response strength*. It may be that the response potential is stronger for some other dangerous act "b" or for act "a" directed at another victim "y." Or, some completely nonaggressive act satisfying competing drives such as hunger, sex, or status might be prepotent.

SOURCES OF ERROR IN PREDICTING DANGEROUS BEHAVIOR

This essay began with the assertion that error is inevitable in the prediction of behavior. It should be clear to any readers who have persevered this far that this is particularly true in the case of dangerous behavior because of the numerous pitfalls along the way. It is easy to make an error in identifying the relevant variables, especially the situational factors, and even easier to encounter difficulties in assessing them reliably or validly. Even if this is done correctly, one can make mistakes as he attempts to determine the interaction of these variables or

estimate the relative response potential of dangerous and nondangerous acts.

Unfortunately, once such errors are made, they are greatly magnified by another factor peculiar to dangerous and other infrequent forms of behavior. This is the base-rate problem identified by Meehl and Rosen (1955). Applying Bayes' Theorem, Meehl and Rosen (1955) demonstrated that whenever we attempt to predict infrequent events, even a moderate false positive rate will result in large numbers of people being erroneously diagnosed.

In predicting dangerous behavior, we can make two types of errors: "false positives" are those individuals that we erroneously predict will engage in dangerous behavior, whereas "false negatives" are those whom we erroneously predict will not engage in dangerous behavior. Although the public is more concerned about the false negatives who are released and later attack someone, it is the false positives who, by sheer weight of numbers, call into question the possibility of accurately predicting dangerous behavior (Stone, 1975).

Let us suppose that someone devises a method of predicting dangerous behavior that far exceeds any technique currently available and that a validation study shows this new technique correctly identifies 85% of the people who later engage in dangerous behavior (i.e., has a false negative rate of 15%) and 90% of these who do not behave dangerously (i.e., has a false positive rate of 10%). Although the false negative rate exceeds the false positive rate, application of this technique to a random sample of 100,000 U.S. citizens would demonstrate the pernicious effect of false positives. Recently reported data indicates that the base rate for violent crime in the United States is 187 per 100,000 (Hindelang, Dunn, Aumick, and Sutton, 1975). The new test would accurately identify 85% or 159 of the 187 violent individuals. So far so good. But what of the 99,813 citizens who will not behave dangerously? Because of the 10% false positive rate, the test will erroneously predict that 9,981 of these individuals will commit acts of violence.

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Combining the 9,981 false positives and the 28 false negatives, we see that by using the test we would make 10,009 mistakes. On the other hand, if we had not used the test and had simply predicted no one would be violent, we would have made only 187 errors.

Unfortunately, none of our techniques has a false positive rate as low as our hypothetical example (Monahan, 1975). Follow-up studies of people classified as dangerous who have subsequently been released or transferred show false positive rates of 65% (Kozol, Boucher and Garofalo, 1972), 76% (women) and 80% (men; Steadman and Halatyn, 1971), and 86-95% (Wenk, Robison, and Smith, 1972). To be sure, Kozol (1975) now estimates that with improved techniques his team has been able to lower the false positive rate among previously violent patients to about 50%, but applied to our random sample of 100,000, a 50% false positive rate would result in erroneous predictions of violence for 49,906 people. As Stone

TABLE 1
Use of a Hypothetical Test with a False Positive Rate of 10 Percent and a False Negative Rate of 15 Percent to Predict Dangerous Behavior in a Random Sample of 100,000 United States Citizens

Predicted Behavior	Actual Behavior		Total
	Dangerous	Not Dangerous	
Dangerous	159 (true positive)	9,981 (false positive)	10,140
Not dangerous	28 (false negative)	89,832 (true negative)	89,860
Total	187	99,813	100,000

(1975: 28) has stated, "if dangerousness is the sole criterion for civil commitment or other preventive detention, and if an empirical study demonstrates violence is a rare event (low base rate), then even if we had a very good predictive technique or device, we would end up confining many more false than true positives."

SOCIAL POLICY IMPLICATIONS

Most mental health professionals will at some time find themselves in a position in which they must decide whether an individual is likely to engage in behavior that is dangerous to him or herself or to others. Although this question most often confronts clinicians working in criminal justice and inpatient psychiatric settings, others in private practice, in school settings or community mental health centers will also have occasion to make such predictions. Given the current state of the art, what stance should they adopt?

Some may simply refuse to make such predictions on the grounds that the problems discussed thus far make errors inevitable. Although each person must be guided by his individual professional values, the present writer disagrees with this Pilate-like position. It is facile, but correct, to point out that someone has to make these predictions. If there are data that show that better predictions are made without his professional input, then by all means a clinician should decline to participate. Otherwise, as long as predictions regarding dangerous behavior are going to be made, the author feels mental health professionals should contribute to the best of their ability.

More cogent is the fact that in predicting dangerous behavior, the assessor must balance the often-conflicting needs of at least three parties—the person regarding whom the prediction is made (the "predictee" if you will), that person's potential victim, and society at large.[1] In the author's opinion, those who refuse to

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predict dangerous behavior are letting their concern for the rights and welfare of the "predictee" blind them to their obligations to the potential victim and to society.

One way of crystallizing the issues is to imagine, despite all the evidence to the contrary, that it was possible to identify with complete accuracy those individuals who were going to engage in dangerous behavior. If so, would society have the right to intervene?

The author finds it impossible to cope with such questions without considering the nature of the intervention. Counselors and therapists in some settings are required to warn potential victims if a client appears likely to attack them. Law enforcement agencies can warn individuals likely to engage in dangerous behavior, confiscate their weapons, and, on various legal or psychiatric grounds, usually arrange for a brief period of preventive detention. The present author would have no great reservations about any of these relatively benign interventions if dangerous behavior could be predicted this accurately.

But what if the intervention took the form of confinement for an indefinite period? Such preventive detention would clearly be in the interest of the potential victim but not the potential attacker, except insofar as it might be better in the long run for the latter not to commit a crime of violence. Although the public at large undoubtedly favors the safety of the potential victim over the civil rights of the potential attacker, consideration of the best interest of the third party, society, leads the present writer to adopt a middle course. If the predictee has already engaged in behavior that warrants confinement in its own right, then he would favor preventive detention. For example, if the predictee is hospitalized for mental illness or imprisoned for some crime, then the certainty that the predictee will engage in violence would, in my opinion, warrant continued confinement even though he or she might otherwise be eligible for release or parole. If the predictee is not confined but has engaged in overt behavior that would warrant confinement such as uttering threats, acquiring an illegal weapon, or

entering into criminal conspiracy, then the writer would advocate prosecution for that behavior, with all appropriate legal safeguards, and confinement if the predictee were convicted. Similarly, if the individual is committable as mentally ill, this could be undertaken.

However, if the individual is not currently confined and has engaged in no overt behavior or exhibited no other symptoms that would warrant confinement, then the writer would be reluctant to advocate indefinite detention. In my opinion, the harm done to society as a whole for any of its members to be confined indefinitely on the basis of expert opinion rather than overt behavior outweighs the threat to one member of society, namely the victim.

Of course, as we have established, predictions of dangerous behavior are hardly infallible. Examining the problem of predicting dangerous behavior from a purely theoretical standpoint, we saw that errors are inevitable and, when we are working with populations in which dangerous behavior is infrequent, the base rate problem will magnify these errors and result in an excessive number of false positives.

To be right most of the time, a person should go along with the base rates and predict no dangerous behavior will occur. However, rather than be right most of the time, the author prefers a decision model that minimizes the possible adverse consequences for all concerned, the predictee, the potential victim, and society.

A rough screening procedure with literally thousands of false positives is justifiable if the adverse consequences to the predictees are relatively benign. Who can calculate the false positive rate of the psychological screening profiles used by airlines to identify potential hijackers or by the Secret Service to spot potential assassins? But if the only consequences of being classified as a potential air pirate or presidential assassin are being denied access to an aircraft, or proximity to the President, then the writer feels it is better to have a thousand false positives than a single false negative.

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But what if the consequences are less benign? What if the prediction that someone will engage in dangerous behavior means that he or she will be denied parole from a correctional institution or involuntarily committed to a mental institution?[2]

The first requirement in such cases is that the prediction should be based on the most complete and valid procedures currently available to minimize errors in general and false positives in particular. Mental health professionals should limit themselves to predicting dangerous behavior in high base-rate populations such as those who have already engaged in repeated violence. Kozol et al. (1972) have flatly stated, "No one can predict dangerous behavior in an individual with no history of dangerous acting out." Moreover, predictors should refuse to allow themselves to be trapped into a dichotomous decision model. Instead, they should set cutting scores on both ends, predicting dangerous behavior for those at one extreme, no dangerous behavior for those at the other, and admitting they cannot predict for those in the middle.[3] Thirdly, prediction should be confined to cases for which there is a good understanding of the situation or milieu. One would expect better prediction of violence inside institutions, where the environment is similar for all, than in community settings, which are more variable.

Despite these measures, it is clear we cannot predict dangerous behavior with absolute certainty. Kozol et al. (1972) obtained follow-up data on a sample of patients who were released despite the fact that Kozol's psychiatric team had classified them as dangerous; only 35% actually engaged in violence. On the basis of these data, then, we can believe Harry Kozol and his team if they point to three individuals and say, "If these three people are released, one of them will attack someone, but we do not know which one of the three will do so." Does society have the right to confine two people unnecessarily to prevent violence by a third? Or, on the other hand, does society have the right to release any of the three and thereby knowingly endanger someone else's very life?

Some who would endorse preventive detention if dangerous behavior could be predicted with 100% accuracy will balk at the notion of confining two to prevent violence by a third. The present writer's response would be similar to the guidelines he suggested for the perfectly accurate prediction, i.e., confine only those whose overt behavior would justify confinement even if no prediction had been made. With others take less drastic steps to deter violence such as providing close parole supervision, warning potential victims, or perhaps requiring the posting of peace bonds.

Thus far we have been grappling with these problems on a moralistic basis, balancing the rights of predictees against the safety of potential victims and the preservation of social structure. A "hard-headed" pragmatist might attempt to resolve the dilemma through a cost-benefit analysis. What is the total cost to society of confining 100 of Kozol's patients? This could be calculated by figuring the cost of institutionalizing them (food, buildings, staff, lost earning power, family deprivation, and so on). The same approach could be used to calculate the social cost of the violent behavior—rapes, murdering, child molesting—engaged in by the 35 who became violent, using insurance company estimates of the dollar cost of these crimes to society. The analyst could then determine if society shows a profit or a loss from confining 100 "dangerous" individuals to prevent violence by 35. Although the assigning dollar values to human suffering is morally repugnant, it is one way to resolve the dilemma. However, there is no way to calculate how much it cost society as a whole to curtail the civil liberties of a few.

The public at large is probably not overly concerned about the loss of civil liberties or the unnecessary confinement of people erroneously labeled "dangerous." Clearly most people identify with the victim and place a premium on personal safety, and the professional will experience much more criticism for 'false negatives' than for false positives. Nevertheless, in addition to modifying and improving the prediction process to minimize the number of errors, it is time for mental health

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professionals to accept the responsibility to consider in each case the ethical and social implications of their predictions. After all, if the predictors do not worry about the consequences of predicting dangerous behavior, who will?

NOTES

1. The writer prefers the rather artificial term "predictee" to the more commonly used noun "client," because the latter term implies the clinician is working for the "predictee" when in fact he or she may be working for an institution or agency.

2. Technically, only a mentally ill person can be committed; however, being dangerous to oneself or others is often inextricably interwoven with the definition of mental illness. For example the state of the Washington code stipulates, " 'Mentally ill person' shall mean any person found to be suffering from psychosis or other disease impairing his mental health, and the symptoms of such disease are of a suicidal, homicidal, or incendiary nature, or of such nature which would render such person dangerous to his own life or to the lives or property of others" (Brakel and Rock, 1971: 71).

3. Any psychologist who plans to adopt this procedure should carry several vials of ammonia with him since lawyers, judges, parole officers and the like are apt to faint from the shock of hearing a psychologist appearing as an expert witness admit his ignorance.

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FAMILY COURT PLACEMENT OF MENTALLY RETARDED JUVENILE OFFENDERS AND THE USE OF INTELLIGENCE TESTING

A Reply to Sussman

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The occurrence of mental retardation among delinquent offenders, the use of the intelligence test in court dispositions, and placement issues were examined in response to Sussman's polemic on the use of psychological testing in the juvenile justice system. Data presented failed to support several of Sussman's important contentions.

In a recent article on the use of psychological testing in the juvenile justice process, Sussman (1974) argued that intelligence tests are discriminatory, and, in fact, cause serious dispositional and classification errors in the judicial process. Sussman further stated, "If a child has an I.Q. score below 70, for example, he may be sent to a state school for the mentally retarded, where he might remain for years to come." He later added, "Private institutions (usually better staffed and less punitive than training schools) *will almost never* [italics ours] accept a child from Family Court whose I.Q. is less than 90, or even 100." The major thrust of his article and his conclusion was, "the administration of I.Q. tests to children, and their

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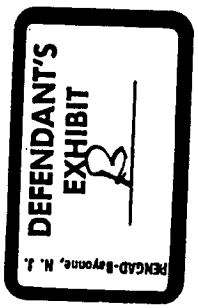
DEFENSE EXHIBIT B

1978

(D)



The Prediction of Violent Criminal Behavior: A Methodological Critique and Prospectus

JOHN MONAHAN

I. OVERVIEW

The identification of persons who reliably can be predicted to engage in dangerous behavior has been called "the greatest unresolved problem the criminal justice system faces" (Rector 1973) and "the paramount consideration in the law-mental health system" (Stone 1975). It is the purpose of this paper to suggest how the problem of predicting dangerous behavior might be clarified by improved methods of empirical research. Current public policies that rely upon the prediction of violence will be briefly reviewed, the empirical data to date will be summarized, and hypotheses will be offered to account for the obtained findings. Following this, five general recommendations for future research in violence prediction will be presented, each with a specific proposal for implementation.

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II. CURRENT POLICY USES OF VIOLENCE PREDICTION

The task of identifying violence-prone individuals has been allocated to the criminal justice and mental health systems. In both systems, predictions of violence[1] are variables in decision-rules relating to who should be institutionalized and who should be released from an institution—the institution being a jail, prison, civil mental hospital, or hospital for the criminally insane.

In the criminal justice system, predictions of violence may be introduced in at least five stages of the judicial process (compare Shah 1976): (a) decisions whether or not to grant bail, and, if bail is to be granted, decisions on the level at which bail is set; (b) decisions whether certain offenders should be transferred from juvenile to adult court for trail; (c) sentencing decisions imposing probation or imprisonment or death[2], and, if imprisonment is imposed, decisions on the length of imprisonment; (d) parole decisions; and (e) decisions whether to invoke special statutes dealing with "dangerous sex offenders," "dangerous mentally ill offenders," or "habitual" criminals (Monahan and Hood 1976).

In the mental health system, predictions of violence are employed primarily in terms of decisions regarding civil commitment to a mental hospital and release from such commitment.

Two recent and contradictory trends in public policies involving the prediction of violence are clearly discernible. One is the increased reliance upon the "dangerousness standard" as the primary or sole justification for civil commitment in the mental health system; many states now follow California's 1969 lead in rewriting commitment laws to emphasize the role of violence prediction (*Harvard Law Review* 1974). The second trend is the decreased reliance upon predictions of violence in determining release from prison in the criminal justice system. Several state legislatures (e.g., California, Maine) have recently passed or are now considering bills to abolish indeterminate sentences

1) bail
2) juvenile → adult
3) sentencing
4) parole
5) ? to invoke special statutes dealing w "dangerous sex offenders, etc."

[1]A distinction between "violence," "violent behavior," "dangerousness," and "dangerous behavior" will not be attempted in this report, although arguments can be made in favor of using one term rather than another (Sarbin 1967, Megargee 1976).

[2]The United States Supreme Court recently held that it was not unconstitutional for a state to make the imposition of the death penalty on an offender convicted of certain categories of murder contingent upon a prediction that he or she would be violent in the future. "It is, of course, not easy to predict future behavior. The fact that such a determination is difficult, however, does not mean that it cannot be made" (Jurek v. Texas, 96 S.Ct. 2950 [1976]).

in which the prisoner's release date is determined by a parole board and based in part upon a prediction of his potential for future violence, in favor of sentences of a more definite length set by the judge (*cf.* Morris 1974; Twentieth Century Fund 1976; von Hirsch 1976).

III. SUMMARY OF VIOLENCE PREDICTION RESEARCH

The eight major research efforts attempting to validate predictions of violence are summarized in Table 1.[3]

Wenk *et al.* (1972) report three massive studies on the prediction of violence undertaken in the California Department of Corrections. In the first study, a violence prediction scale that included variables such as commitment offense, number of prior commitments, opiate use, and length of imprisonment was able to isolate a small group of offenders who were three times more likely to commit a violent act than parolees in general. However, 86 percent of those identified as violent did not, in fact, commit a violent act while on parole.

In the second study, over 7,000 parolees were assigned to various categories keyed to their potential aggressiveness on the basis of their case histories and psychiatric reports. One in five parolees was as-

TABLE 1[a] Research Studies on the Prediction of Violence

Study	% True Positives	% False Positives	N Predicted Violent	Follow-up Years
Wenk *et al.* (1972) Study 1	14.0	86.0	?	?
Wenk *et al.* (1972) Study 2	0.3	99.7	1630	1
Wenk *et al.* (1972) Study 3	6.2	93.8	104	1
Kozol *et al.* (1972)	34.7	65.3	49	5
State of Maryland (1973)	46.0	54.0	221	3
Steadman (1973)	20.0	80.0	967	4
Thornberry and Jacoby (1974)	14.0	86.0	438	4
Cocozza and Steadman (1976)	14.0	86.0	96	3

[a]Updated from Monahan (1976).

[3]This section draws heavily from Monahan (1975, 1976) and Monahan and Cummings (1976).

signed to a "potentially aggressive" category, and the rest to a "less aggressive" category. During a 1-year follow-up, however, the rate of crimes involving actual violence for the potentially aggressive group was only 3.1 per 1,000, compared with 2.8 per 1,000 among the less aggressive group. Thus, for every correct identification of a potentially aggressive individual, there were 326 incorrect ones.

The final study reported by Wenk *et al.* (1972) sampled over 4,000 California Youth Authority wards. Attention was directed to the record of violence in the youth's past and an extensive background investigation was conducted, including psychiatric diagnoses and a psychological test battery. Subjects were followed for 15 months after release, and data on 100 variables were analyzed retrospectively to see which items predicted a violent act of recidivism. The authors concluded that the parole decision maker who used a history of actual violence as his sole predictor of future violence would have 19 false positives in every 20 predictions, yet "there is no other form of simple classification available thus far that would enable him to improve on this level of efficiency" (p. 399). Several multivariate regression equations were developed from the data, but none was even hypothetically capable of doing better than attaining an 8-to-1 false-to-true positive ratio.

Kozol *et al.* (1972) have reported a 10-year study involving almost 600 offenders. Each offender was examined independently by at least two psychiatrists, two psychologists, and a social worker. A full psychological test battery was administered and a complete case history compiled. During a 5-year follow-up period in the community, 8 percent of those predicted not to be dangerous became recidivists by committing a serious assaultive act, and 34.7 percent of those predicted to be dangerous committed such an act. While the assessment of dangerousness by Kozol and his colleagues appears to have some validity, the problem of false positives stands out. Sixty-five percent of the individuals identified as dangerous did not, in fact, commit a dangerous act. Despite the extensive examining, testing, and data gathering they undertook, Kozol *et al.* were wrong in two out of every three predictions of dangerousness. (For an analysis of the methodological flaws of this study, see Monahan 1973b, and the rejoinder by Kozol *et al.* 1973.)

Data from an institution very similar to that used by Kozol *et al.* have recently been released by the Patuxent Institution (State of Maryland 1973). Four hundred and twenty-one patients, each of whom received at least three years of treatment at Patuxent, were considered. Of the 421 patients released by the court, the psychiatric staff opposed the release of 286 on the grounds that they were still dangerous and

recommended the release of 135 as safe. The criterion measure was any new offense (not necessarily violent) appearing on FBI reports during the first 3 years after release. Of those patients released by the court against staff advice, the recidivism rate was 46 percent if the patients had been released directly from the hospital, and 39 percent if a "conditional release experience" had been imposed. Of those patients released on the staff's recommendation and continued for outpatient treatment on parole, 7 percent recidivated. Thus, after 3 years of observation and treatment, between 54 and 61 percent of the patients predicted by the psychiatric staff to be dangerous were not discovered to have committed a criminal act.

In 1966, the U.S. Supreme Court held that Johnnie Baxstrom had been denied equal protection of the law by being detained beyond his maximum sentence in an institution for the criminally insane without the benefit of a new hearing to determine his current dangerousness (*Baxstrom v. Herold*, 1966). The ruling resulted in the transfer of nearly 1,000 persons "reputed to be some of the most dangerous mental patients in the state [of New York]" (Steadman 1972) from hospitals for the criminally insane to civil mental hospitals. It also provided an excellent opportunity for naturalistic research on the validity of the psychiatric predictions of dangerousness upon which the extended detention was based.

There has been an extensive follow-up program on the Baxstrom patients (Steadman and Cocozza 1974). Researchers find that the level of violence experienced in the civil mental hospitals was much less than had been feared, that the civil hospitals adapted well to the massive transfer of patients, and that the Baxstrom patients were being treated the same as the civil patients. The precautions that the civil hospitals had undertaken in anticipation of the supposedly dangerous patients—the setting up of secure wards and provision of judo training to the staff—were largely for naught (Rappaport 1973). Only 20 percent of the Baxstrom patients were assaultive to persons in the civil hospital or the community at any time during the four years following their transfer. Furthermore, only 3 percent of Baxstrom patients were sufficiently dangerous to be returned to a hospital for the criminally insane during 4 years after the decision (Steadman and Halfon 1971). Steadman and Keveles (1972) followed 121 Baxstrom patients who had been released into the community (i.e., discharged from both the criminal and civil mental hospitals). During an average of 2½ years of freedom, only nine of the 121 patients (8 percent) were convicted of a crime and only one of those convictions was for a violent act. The researchers found that a Legal Dangerousness Scale (LDS) was most

predictive of violent behavior. The scale was composed of four items: presence of juvenile record, number of previous arrests, presence of convictions for violent crimes, and severity of the original Baxstrom offense. In subsequent analyses, Cocozza and Steadman (1974) found that the only other variable highly related to subsequent criminal activity was age (under 50 years old). In one study, 17 of 20 Baxstrom patients who were arrested for a violent crime when released into the community were under 50 and had a score of 5 or above on the 15-point Legal Dangerousness Scale. Yet the authors conclude (pp. 1013-1014)

> For every one patient who was under 50 years old and who had an LDS score of 5 or more and who was dangerous, there were at least 2 who were not. Thus, using these variables we get a false positive ratio of 2 to 1. . . . Despite the significant relationship between the two variables of age and LDS score and dangerous behavior if we were to attempt to use this information for statistically predicting dangerous behavior our best strategy would still be to predict that none of the patients would be dangerous.

The Supreme Court's Baxstrom decision prompted a similar group of "mentally disordered offenders" in Pennsylvania to petition successfully for release in *Dixon v. Pennsylvania*, 1971. The results of the release of 438 patients have been reported by Thornberry and Jacoby (1974) and are remarkably similar to those reported by Steadman. Only 14 percent of the former patients were discovered to have engaged in behavior injurious to another person within 4 years after their release.

Finally, Cocozza and Steadman (1976) followed 257 indicted felony defendants found incompetent to stand trial in New York state in 1971 and 1972. All defendants were examined for a determination of dangerousness by two psychiatrists, with 60 percent being predicted to be dangerous and 40 percent not so. Subjects were followed in the hospital and in the community (if they were eventually released) during a three year follow-up. While those predicted to be dangerous were slightly but insignificantly more likely to be assaultive during their initial incompetency hospitalization than those predicted not to be dangerous (42 percent compared with 36 percent), this relationship was reversed for those rearrested for a crime after their release, with 49 percent of the dangerous group and 54 percent of the not-dangerous group rearrested. Predictive accuracy was poorest in the case of a rearrest for a violent crime, "perhaps the single most important indicator of the success of the psychiatric predictions." Only 14 percent of the dangerous group, compared with 16 percent of the not-dangerous group, were rearrested for violent offenses. While these data are susceptible to alternative interpretations (Monahan, in press[a]), the authors believe that they

constitute "the most definitive evidence available on the lack of expertise and accuracy of psychiatric predictions of dangerousness" and indeed represent "*clear and convincing evidence* of the inability of psychiatrists or of anyone else to accurately predict dangerousness."

The conclusion to emerge most strikingly from these studies is the great degree to which violence is overpredicted. Of those predicted to be dangerous, between 54 and 99 percent are false positives—people who will not, in fact, be found to have committed a dangerous act. Violence, it would appear, is vastly overpredicted, whether simple behavioral indicators or sophisticated multivariate analyses are employed and whether psychological tests or thorough psychiatric examinations are performed.

Several factors have been suggested that might account for the great degree of overprediction found in the research (Monahan 1976).

1. *Lack of corrective feedback to the predictor.* The individual is usually incarcerated on the basis of the prediction and so it is impossible to know whether or not he actually would have been violent (Dershowitz 1970).
2. *Differential consequences to the predictor of overpredicting and underpredicting violence.* False negatives lead to much adverse publicity, while false positives have little effect on the predictor (Steadman 1972).
3. *Differential consequences to the individual whose behavior is being predicted.* A prediction of violence may be necessary to ensure involuntary treatment (Monahan and Cummings 1975).
4. *Illusory correlations between predictor variables and violent behavior.* The often cited correlation between violent behavior and mental illness, for example, appears to be illusory (Gulevich and Bourne 1970, Sweetland 1972).
5. *Unreliability of violence as a criterion event.* There is little consensus as to the definition of violence, and great unreliability in verifying its occurrence (Monahan and Geis 1976).
6. *Low base rates of violence.* The prediction of any low-base-rate event is extremely difficult (Rosen 1954).
7. *Low social status of those subjected to prediction efforts.* Overprediction may be tolerated in part because of class biases in the criminal justice and mental health systems (Geis and Monahan 1976, Monahan *et al.* in press).

IV. FUTURE RESEARCH DIRECTIONS IN THE PREDICTION OF VIOLENCE

The conclusion of Wenk and his colleagues (1972) that "there has been no successful attempt to identify, within . . . offender groups, a subclass whose members have a greater than even chance of engaging again in an assaultive act" is widely shared by researchers in the field (e.g., Stone 1975, Megargee 1976). There is no consensus, however, on the implications of this conclusion for future research. Some agree with Wilkins's (1972) assessment of a major California prediction study that "research along these lines does not seem worthwhile to press. Perhaps this study should be 'the last word' for some time in attempts to 'predict' violence potential for individuals." Others side with Halatyn (1975) that the empirical studies to date "reflect data and design limitations which should stimulate rather than stifle further research."

While the future may bear out Wilkins's pessimistic judgment, we shall proceed here in the spirit of Halatyn's remarks and assume that the last word on violence prediction has yet to be uttered. A series of research priorities shall be articulated that, if successfully implemented, might improve the ability to predict violence to a point at which it could provide useful information to policy decision makers. The ensuing discussion will consider the criterion variables that define violent or dangerous criminal behavior and the predictor variables that attempt to forecast it. In each of these categories, several recommendations will be made to improve the quality of research in the prediction of violence, and specific proposals for research projects will be offered.

Recommendation One: Research on violence prediction must employ multiple definitions of violence.

Proposal One: Violence should be defined in a hierarchy including (a) the four FBI *violent index crimes of murder, forcible rape, robbery, and aggravated assault, and (b) all assaultive acts against persons.*

The choice of a definition of violence for research purposes would be made more simple if there were a consensus among either the public or professional groups as to what behaviors should be counted as dangerous. Unfortunately, no such consensus exists (Monahan and Hood, in press). Given this fact, the appropriate research strategy would seem to lie in the direction of multiple definitions of violence. Research on violence prediction should use several hierarchical definitions of the criterion, each succeeding one being more inclusive than that before it.

This would have two substantial advantages over the current proliferation of studies employing a single arbitrary definition of violent or dangerous behavior:

1. It would allow a greater degree of comparability across studies. As things stand now, it is very difficult to compare the results of prediction research projects that use different criteria. Even projects as similar as Kozol *et al.* (1972) and state of Maryland (1973) did not use similar criteria. Kozol *et al.* defined their criterion as "serious assaultive acts," while at Patuxent, the definition was "any new offense, not necessarily violent."
2. It would facilitate policy implications being drawn from the research. Violence, as Skolnick (1969, p. 4) notes "is an ambiguous term whose meaning is established through political processes." If researchers could present policy makers with a series of plausible definitions of violence, each with attendant empirical data with regard to predictability, the final choice of definition could be left in the political arena (Heller and Monahan 1977).

In establishing multiple definitions of violence, it should be noted that the more inclusive the definition, the greater the predictive accuracy: Large targets are easier to hit than small ones. The data bear out this axiom. One attempt to predict "assaultive behavior" had 16 percent true positives when the criterion was defined as "homicide, all assaults, attempted murder, battery, forcible rape and attempt to rape"; 22.6 percent true positives when the criterion was expanded to include "other sex offenses and kidnapping"; and 53 percent true positives when assaultive behavior was construed still more loosely to encompass "all of the above plus robbery, all sex offenses, weapon offenses and disturbing the peace" (cited in Halatyn 1975). While predictive accuracy is indeed increased as definitions of violence expand, there comes a point at which it is arguable whether one is studying violence or simply any kind of lawbreaking. Including "disturbing the peace" as violent, for example, would seem to stretch the concept to its breaking point.

It would be reasonable to specify initially that at least two levels of the criterion must be identified in future research. One level should be violence in its most strict construction, and the other should be somewhat more inclusive in nature. The narrowest definition of violent crime in common use is that employed by the Federal Bureau of Investigation (e.g., Kelley 1976). Violent crime, according to the FBI, is restricted to (a) murder, (b) forcible rape, (c) robbery, and (d) aggra-

vated assault. There would seem to be little disagreement that these four acts are indeed violent ones.

At the more inclusive level, the kinds of acts referred to by Cocozza and Steadman (1974) and Rubin (1972) as "assaultive behavior against persons," or more formally by Megargee (1976) as "acts characterized by the application or overt threat of force which is likely to result in injury to people" appear reasonably to be definable as violent. According to Megargee (p. 5):

> this use of the term [violent] includes, but is not restricted to, such criminal acts as homicide, mayhem, aggravated assault, forcible rape, battery, robbery, arson, and extortion. Criminal behavior not likely to result in injury to people, such as noncoercive thefts or vandalism, are excluded, as are business practices which, although injurious to people, do not involve the application of force.

It is not possible to list precisely all the crimes to be included in this second-level definition of violence, since the categorization of crimes differs from state to state and since many violent acts will result in civil commitment rather than arrest (Cocozza and Steadman 1974). Yet the thrust of defining violence in terms of "assaultive acts against persons" could be captured in future research studies and could add substantially to our ability to compare various prediction efforts and draw policy-relevant information from them.

In research on clinical predictions[4] of violence, it would also appear necessary to achieve a consistency between the "working definitions" of violent behavior employed by the individuals making the predictions and the definitions used in the follow-up research. If a psychiatrist considers "writing a bad check" to be a sufficiently dangerous behavior to justify institutionalization to prevent its occurrence (*Overholser v. Russell*, 1960), and if the validation researcher is limiting his or her definitions of dangerousness to the FBI violent index crimes and assaultive behavior against persons, it is not surprising that overprediction would be reported. Rather than overprediction, however, this would more properly be a case of unsynchronized definitions. Even if the predictions were perfectly accurate—if those predicted to write bad checks actually wrote them—the follow-up researcher using less inclusive definitions of violence would report them as false positives. The two ways in which this inconsistency could be resolved are to match the follow-up criteria to the working definitions used by the clinicians

[4]See the discussion of Recommendation 4 in Section IV for a discussion of clinical and actuarial prediction.

predicting violence, or to provide the clinicians with the definitions to be used in the follow-up and have them predict according to those definitions. Given the need for consistency across different prediction studies, as well as within each prediction study, the latter alternative would appear to be preferable.

Recommendation Two: Research on violence prediction must employ multiple time-periods for follow-up validation.

Proposal Two: Studies should report follow-up results at (a) 1 year, (b) 3 years, and (c) 5 years after release.

The empirical attempts to validate predictions of violence have used a follow-up period of from 1 to 5 years (Table 1). It is self-evident that the longer the follow-up period, the more likely one is to find high rates of true positives, due to the fact that each individual has more opportunity to commit a violent act. Given the difficulty of predicting low-base-rate events, lengthening the follow-up period will have the effect of increasing the base rate, and hence lowering the probability of false positives. The data bear this out. The two studies employing a 1-year follow-up had false positive rates of 99.7 and 93.8 percent, while the six studies using a 3- to 5-year follow-up had false positive rates of 86.0, 86.0, 86.0, 80.0, 65.3, and 54.0 percent.

As with the definition of the criterion, the specification of the follow-up period is not a case of choosing the "best" way to do research. Multiple follow-up periods would serve the same function as multiple definitions: They would increase comparability between studies and facilitate the generation of policy-oriented knowledge. As an attempt at this needed "standardization" of research studies, the reporting of follow-up results at 1-year, 3-year, and 5-year intervals would appear to be both reasonable and feasible.

In the case of predictions by mental health professionals, it would seem that a specification of the duration of the follow-up periods should be made at the time of the original predictions. It would then be possible for different predictions to be made for each of the follow-up periods. For example, a psychiatrist could predict that a given offender or patient had a 30-percent probability of committing a violent act within 1 year after release, a 60-percent probability within 3 years, and an 80-percent probability within 5 years.

Recommendation Three: Research on violence prediction must employ multiple methods of verifying the occurrence of violent behavior.

Proposal Three: Verification methods should be employed in a

hierarchy including (a) conviction rates; (b) conviction rates and arrest rates; (c) conviction rates, arrest rates, and rates of civil commitment to mental hospitals; and (d) all of the above plus self-report.

In the prediction studies to date, police arrest rates have been the primary means of verifying whether or not a violent act has occurred during the follow-up period. For at least two reasons, however, arrest rates are inadequate methods of verification: Most violent behavior is never reported to the police, and the violent behavior that is reported often does not lead to the recording of an arrest.

On the first point, a recent victimization study in eight major American cities found that only 40 to 50 percent of all violent crime was reported to the police. The reporting rate for simple assault ranged from 27 to 39 percent (U.S. Department of Justice 1974). While the reasons for not reporting a crime are varied (e.g., embarrassment, fear of retaliation, low opinion of police effectiveness), the result of underreporting is surely to reduce the usefulness of arrest records as a means of verifying the occurrence of violent behavior (Halatyn 1975).

Added to this is the fact that the "clearance rate" of reported crime (i.e., the percentage of reported crime that results in an alleged offender being charged and taken into custody) is far from perfect. While the clearance rate for murder is reasonably high (79 percent), the clearance rates for forcible rape (51 percent), aggravated assault (63 percent), and robbery (27 percent) are such that a large portion of the violent crime that is reported never finds its way into police statistics (Kelley 1976).

In addition to the standard reasons given to account for the low clearance rates for violent crime (e.g., unidentified offenders, lack of evidence, unwillingness of the victim to press charges, etc.), one factor especially relevant to validation studies of the prediction of violence is that mental hospitalization is often used by the police as an alternative to arrest. As Cocozza and Steadman (1974, p. 1013) noted in their follow-up of the "criminally insane" Baxstrom patients, "some of the patients were rehospitalized for behavior very similar to that displayed by other patients who were arrested for violent crimes." One Los Angeles study found that 33 percent of police referrals to a medical center psychiatric unit had as their primary precipitating incident "some degree of aggressive behavior." In none of these cases was an arrest made (Jacobson *et al.* 1973).

When these limitations on the use of official crime statistics are taken in concert, they suggest that many persons classified as false positives in prediction research actually may be leading active careers in violent

crime but simply have not yet been apprehended and charged or, if they have been apprehended, they have been diagnosed as "dangerous to others" and processed through the mental health rather than the criminal justice system.

If it is violent behavior, rather than arrests for reported violent crime, that prediction researchers are really interested in, they would do well to broaden their procedures for verifying its occurrence. Criminal justice statistics are estimates of the amount of violent behavior occurring in a given group predicted to be violent. As such, they should be used along with other indicators of violent behavior to arrive at the most reliable estimate possible.

Each estimate of violent behavior will have its own error costs. Reliance solely upon conviction rates for violent crime to verify the occurrence of violent behavior would tend to avoid the erroneous recording of events as violent, but at an enormous cost in the nonrecording of violent events that do occur.[5] Arrest records likewise will underestimate crime to the extent that it is unreported or uncleared, but against this underestimation there must be a consideration of those innocent persons who are arrested and later acquitted or have the charges dropped. This is even more true with data on civil commitments to mental hospitals, in which discretion as to the definition of violence and the procedures for certifying its occurrence is great (Monahan 1973a, 1973b, 1977a, 1977b).

Additional validation procedures are needed that do not rely upon the official statistics that so underrecord violent behavior. One such procedure is self-report. Self-report methodologies have been used extensively in the study of delinquency (Hirschi 1969) and might be applied fruitfully to the study of adult violence. In this regard, Toch (1969) has developed a "peer interview" technique whereby parolee research assistants interview other parolees regarding instances of violent behavior. With appropriate guarantees of confidentiality, such methods may provide an extremely valuable addition to the use of official statistics to validate predictive judgments. A representative sample of a cohort of ex-prisoners or ex-patients whose potential for violence is being assessed could be interviewed by other ex-prisoners or ex-patients at 1-, 3-, and 5-year intervals to obtain data on actually committed, but not recorded, violent behavior.

As with the definition of violence and the duration of the validation period, multiple methods for verifying the occurrence of violent behav-

[5]It should be clear that the use of estimates of criminality other than conviction is for research purposes only, since due process considerations preclude their use in the disposition of individual cases.

ior would appear appropriate in future research. A hierarchy of validation procedures beginning with convictions then sequentially adding arrests, mental hospital commitments,[6] and self-reports might be a viable approach. Such a tack, as earlier, should increase comparability across prediction studies and facilitate the derivation of policy implications from the data.

Recommendation Four: Research on violence prediction should stress actuarial rather than clinical methods.

Proposal Four: Actuarial models of the clinical decision-making process should be constructed.

The two generic methods by which violent behavior (or any other kind of event) may be anticipated are known as clinical and actuarial prediction. In clinical prediction, a psychologist, psychiatrist, parole board member, or other person acting as a "clinician" considers what he or she believes to be the relevant factors predictive of violence and renders an opinion accordingly. This was the method used in the Kozol, Steadman, Thornberry and Jacoby, and Patuxent studies reviewed earlier. The clinician may rely in part upon actuarial data in forming the prediction, but the final product is the result of an intuitive weighting of the data in the form of a professional judgment. Actuarial (or statistical) prediction refers to the establishment of statistical relationships between given predictor variables (e.g., age, number of prior offenses) and the criterion of violent behavior. This method was used in the Wenk *et al.* series of studies. The prediction variables may include clinical diagnoses or scores on psychological tests, but these are statistically weighted in a prediction formula.

One of the "great debates" in the field of psychology has revolved around the relative superiority of clinical versus actuarial methods. It is one of the few such debates to emerge with a clear-cut victor. With the publication of Paul Meehl's classic work in 1954 and its many subsequent confirmations (Sawyer 1966), actuarial methods have come to be recognized as the generally superior way of predicting behavior.

At first glance, the research reviewed above on the prediction of violence would appear to constitute an exception to this rule. The five clinical studies have reported substantially better predictions than the three actuarial ones. While several confounding factors make this

[6]By commitment here is meant commitment to a mental hospital through the police power rather than the *parens patriae* power of the state (Kittrie 1971, Shah 1977). Thus, in California, a civil commitment as "dangerous to others" should be counted in validation studies, while commitment as "gravely disabled" (which is defined as an inability to feed, clothe, or house oneself) should not.

comparison problematic (e.g., the base-rate for violent behavior was higher, and the follow-up period longer for the clinical than for the actuarial studies), it would at least be fair to conclude that the actuarial method has not shown the same superiority over the clinical method in the case of violence as it has with the prediction of other behaviors.

Two conflicting interpretations might be drawn from a comparison of the clinical and actuarial studies. One is that clinical prediction methods really do constitute the best way to predict violent behavior, and that future research should focus on improving the predictive accuracy of clinicians. The other is that actuarial methods have not yet lived up to their potential, judging from their performance in other areas, and that a priority for future research should be the development of more sophisticated actuarial models. We shall argue for the latter interpretation.

While it is undoubtedly true that much can be done to improve the accuracy of clinical predictions of violence—including the multiple definitions, validation periods, and methods of verification mentioned earlier and the inclusion of situational variables, to be discussed below—the impression persists that clinicians have taken their best shot at predicting violence and that future improvements will not drastically alter the two-to-one false positive ratio reported so consistently. The Kozol and Patuxent studies, for example, both involved extensive multidisciplinary examinations over a lengthy period of observation in nationally recognized institutions. The base rates for violence in their populations were high, the follow-up periods long, and the criteria generous. Still, a majority of the predictions were erroneous in both cases.

Actuarial studies, on the other hand, have often been based on "general purpose variables" (Wenk and Emrich 1972) rather than on theoretically derived predictors and have been employed with short follow-up periods on populations with very low base-rates of violent behavior. There have been few actuarial studies of any sort, and all have relied on data from a single source (the California Department of Corrections). It would seem that actuarial methods need to be pursued with more vigor before an exception is declared to the general superiority of actuarial over clinical prediction.

But perhaps too much has been made in the past of distinguishing actuarial and clinical methods, and not enough of how each might contribute to the other. Clinical predictions, as was noted, may take into account actuarial tables, and actuarial prediction may incorporate clinical judgments. Two possible strategies for cross-fertilization, therefore, suggest themselves. One is to provide clinicians with as

much actuarial information as possible, to see if this affects their predictions. The other is to construct actuarial models based upon the variables used in the clinical decision-making process.

On the first point, Hoffman *et al.* (1974) presented actuarial prediction tables to parole board members reviewing the files of adult male inmates for parole consideration. The board members were then asked for their own clinical predictions and for a decision on whether the inmates should be paroled or kept in prison. They found that the correlation between statistical risk estimates based on the actuarial tables and the board's clinical risk estimates was 0.74 when the actuarial tables were presented to board members before they made their clinical judgments, and 0.53 when the tables were not provided. The correlation between risk estimates and the outcome of the parole decision was 0.30 when the actuarial tables were provided and 0.18 when they were not. The provision of actuarial data, therefore, affected both the clinical judgments of the parole board and its parole decisions in the predicted direction.

The difficulty with this strategy is that it is, in effect, matching clinical judgments to actuarial ones. This will result in improved predictive accuracy only to the extent that the actuarial predictions are, in fact, better than clinical ones would be. In the prediction of violence, however, actuarial predictors have not yet shown their superiority. Based on the results reviewed earlier, influencing clinical predictions to look more like actuarial ones could result in lowered predictive accuracy in the case of violent behavior. This is especially true in light of the fact that Hoffman *et al.* (1974) found that actuarial data were more likely to result in increasing clinical predictions of unfavorable parole outcome (when the actuarial data suggested such an unfavorable outcome) than they were to result in decreased predictions of unfavorable outcome (when the actuarial data were in the favorable direction). This would mean even more false positives if such a strategy were applied to the prediction of violence.

The other possible rapprochement between clinical and actuarial prediction lies in the construction of actuarial models of clinical decision making. Along these lines, Gottfredson *et al.* (1975), relying upon a study that found that the primary variables influencing parole decision making were severity of offense, "parole prognosis," and institutional behavior, developed systematic decision-making guidelines to be fed back to the parole board members from whom the factors were originally derived. They operationalized severity of offense on a 6-point scale and parole prognosis on an 11-point "salient factor" actuarial table, and they developed guidelines concerning the mean sen-

tence served for each severity/risk level. These guidelines were presented to the parole decision makers, as they were reviewing cases, who were asked to record their reasons if their recommended sentence in a given case was outside the range provided (poor performance in the institution, for example, could be one reason for exceeding the guidelines). While no comparison groups were used in this study, the researchers found that 63 percent of the parole recommendations were within the guidelines presented.

Creating actuarial models of the clinical decision-making process in the prediction of violent behavior could have two advantageous effects. First, it would make explicit the variables used in clinical decision making. These variables could then be incorporated on their own account into actuarial models so that their predictive accuracy could be independently assessed. Second, it could increase consistency both between and within individual decision makers, and this increased consistency or reliability could itself lead to improved predictions. As Goldberg (1970) has stated, "linear regression models of clinical judges can be more accurate diagnostic predictors than the humans who are modeled." He goes on to note that a clinician can incorporate and evaluate a great deal of information but that he or she lacks the reliability of a computer always to respond to similar information in similar ways (p. 423):

> [The clinician] "has his days": Boredom, fatigue, illness, situational and interpersonal distractions all plague him, with the result that his repeated judgments of the exact same stimulus configuration are not identical. He is subject to all those human frailties which lower the reliability of his judgments below unity. And, if the judge's reliability is less than unity, there must be error in his judgments—error which can serve no other purpose than to attenuate his accuracy.

Goldberg took a subsample of psychologists' judgments on predicting psychosis from psychological tests and derived a statistical model of their decision-rules. He then had the clinicians and the statistical model of the clinicians compete in predicting psychosis (defined independently) for the rest of the sample. The model won, since it was not subject to the same random errors as were the clinicians from whom it was derived.

It is important to separate the reliability of predictions from their accuracy or validity. Creating statistical models of the clinical prediction process may increase the reliability of the process substantially, but it will increase predictive accuracy or validity only to the extent that some random error is eliminated. Deriving an actuarial model of a clinical prediction process that has low reliability and low validity will

result only in a model with high reliability and almost-as-low validity. The model, in other words, will not be much better than the clinical judgments on which it is based. It may, however, be much quicker and cheaper than human predictions.

Since clinicians do appear to have some (albeit meager) ability to predict violent behavior, a priority for future research should be to create statistical models of the clinical prediction process. The factors obtained could themselves be used in a prediction model (as in Goldberg 1970), or they could be fed back to the clinical decision makers in a systematic fashion to see if they would make more consistent judgments when presented with, in effect, their own preferred data base (as in Gottfredson *et al.* 1975).

Recommendation Five: Research on violence prediction should include situational as well as dispositional predictor variables.

Proposal Five: Situational variables should be derived from conceptions of human environments in terms of (a) personal characteristics of the environment's inhabitants, (b) reinforcement properties of the environment, and (c) the psychosocial climate of the environment.

After one has defined the criteria, specified the validation periods, selected the methods of verification, and decided upon a clinical or an actuarial prediction format, it remains to choose the variables upon which one will base the prediction effort. Ideally, these predictor variables should be related to the criterion variables by virtue of their causal implication in some theory of violent behavior. Yet unlike theories of aggression (e.g., Bandura 1973), theories of human violence have not generated a great deal of scholarly interest (Megargee 1969). This has left the person who would predict violence with only his or her own implicit theory of violence to guide in the selection of predictor variables.

As it happens, since many of the individuals involved in violence prediction efforts have been mental health professionals or others who have adopted a "mental health ideology," almost all of the variables that have been investigated as predictors of violence have been dispositional variables. That is, they have referred to fixed or relatively enduring attributes or traits of the person under study, such as age, sex, race, prior criminal record, or psychiatric history and diagnosis. This reliance upon dispositional variables or personal traits has characterized not only the prediction of violence but the prediction of all types of behavior. The result has been the same in each case: low correlations between predictor and criterion variables (Mischel 1968; *cf.* Bem and Allen 1974). In this regard, Arthur (1971), reviewing studies of the

prediction of military performance, has stated that a prediction "sound barrier" exists, since "no matter how much information about the individual one adds to the predictive equation, one cannot bring the correlation coefficient between individual characteristics and prediction criteria much above about .40" (p. 544). This "sound barrier" remains unbroken by research on the prediction of violence.

An alternative to the dispositional or trait perspective in the mental health fields has arisen that offers a possible source of previously overlooked variables to include in prediction research. While the roots of the ecological perspective on human behavior have been planted for some time (e.g., Park 1925), it is only recently that this approach has been taken seriously in psychology (Kelly 1966, Moos and Insel 1974, Stokols 1977).

The ecological or environmental perspective on human behavior derives in part from a new appreciation of Kurt Lewin's (Lewin *et al.* 1939) dictum that behavior is a joint function of characteristics of the person and characteristics of the environment with which he or she interacts. Until recently, psychological and psychiatric research had focused almost solely on dispositional or person variables. The ecological approach attempts to right this imbalance by an emphasis upon situational or environmental variables, as they interact with personal characteristics. While environmental research of relevance to the topic of violent behavior has been initiated (Newman 1972, Monahan and Catalano 1976), there has as yet been no empirical attempt to apply the ecological or environmental perspective to the problem of prediction. This is despite the fact that there is coming to be widespread agreement with Moos's statement (1975a) that "to adequately predict individual aggressive behavior, one must know something about the environment in which the individual is functioning" (p. 13).

The use of environmental or situational variables in prediction differs from the use of personal or dispositional variables in at least one major way. In the case of dispositional variables, one has only to establish a relationship between the predictors and the criterion. Since the dispositional variables refer to fixed or relatively enduring characteristics of the person, one knows immediately whether any obtained relationship can be applied to a given case: An individual subject will not change from white to black, from male to female, or from 45 to 25 years old over the duration of the follow-up. In the case of situational predictors, however, one must establish both a statistical relationship between a given situation and violent behavior and the probability that the individual will in fact encounter that situation. One might, for example, predict with a high degree of accuracy that a given class of offenders

will resort to violent behavior when confronted with a situation they interpret as a challenge to their masculinity. To predict the actual occurrence of violent behavior, however, one would then have to perform a separate prediction concerning whether they will encounter such situations during the period under investigation.

It can be argued that the inclusion of situational variables is the most pressing current need in the field of violence prediction research. The principal factor inhibiting the development of situational predictors of violence is the lack of comprehensive ecological theories relating to the occurrence of violent behavior.

Moos (1973) has identified six different ways of conceptualizing human environments that have been used in previous research:

1. *Ecological dimensions*, including meteorological, geographic, and architectural variables;
2. *Dimensions of organization structure*, including staffing ratios and organization size;
3. *Personal characteristics of milieu inhabitants*, implying that the character of an environment depends upon the characteristics (e.g., age, sex, abilities) of those who inhabit it;
4. *Behavior settings*, defined by Barker (1968) as units with both behavioral and environmental components (e.g., a basketball game);
5. *Functional or reinforcement properties of environments*, suggesting that people vary their behavior from one setting to another principally as a function of the reinforcement consequences in the different environments; and
6. *Psychosocial characteristics and organizational climate*, in which the characteristics of an environment, as perceived by its members, are measured on various psychosocial scales.

Of these six extant conceptualizations of human environments, two (ecological dimensions and dimensions of organizational structure) appear not to be relevant to the prediction of individual violence, and another (behavior settings) is in an insufficient state of development to allow for its current application to the topic of prediction. The remaining three all provide guidance for the formation of environmental predictors of violence.

Conceptualizing environments in terms of the personal characteristics of milieu inhabitants might lead a researcher to inquire of the about-to-be-released prisoner or mental patient who he or she would be living, working, and recreating with in the post-release environment. The pooled base-rate probabilities of violence for these individuals

(given their age, sex, and prior history of violence, for example) should, according to this approach, relate significantly to the probability of violent behavior being committed by the ex-prisoner or ex-patient who enters the environment.

Emphasizing the functional or reinforcement properties of environments would lead the researcher to a behavioral analysis of the reward contingencies operating in the environments in which the predicted individual would be functioning. If, in a given environment, desired rewards (e.g., material goods, peer approval, self-esteem) can be obtained only by committing violent behavior, then the probability of violence in this environment would be high, according to reinforcement theory.

Finally, environments may be conceptualized for the purpose of prediction according to their psychosocial characteristics and organizational climate. According to Moos, this "social climate" perspective "assumes that environments have unique 'personalities' just like people. Personality tests assess personality traits or needs and provide information about the characteristic ways in which people behave. Social environments can be similarly portrayed with a great deal of accuracy and detail" (1975a, p. 4). He has devised a series of scales to measure the perceived social climates of prisons, hospital wards, community-based treatment programs, classrooms, military units, and families (1975a, 1975b). Common to all these scales are three basic dimensions of the environment: (a) relationship dimensions, such as the degree to which the environment is supportive and involving; (b) personal development dimensions, such as the degree of autonomy the environment provides; and (c) system maintenance and system change dimensions, including the degree to which the environment emphasizes order, organization, and control.

Drawing from Moos's extensive body of research, scales might be derived to describe the psychosocial environment in which a prisoner or mental patient is likely to return when released from an institution. For example, the relationship dimension could be operationalized in terms of items such as, "Is the individual likely to be returning to a parent or spouse, or will he or she be living alone? If the individual will be living with someone else, how likely is that other person to be supportive of a nonviolent lifestyle?" The personal development dimension might involve items concerning how likely the individual will be to attain a satisfying life-style (e.g., as the leader of a peer group) without resort to violence. System maintenance and dimensions of system change might be operationalized by estimates that the indi-

vidual will be employed in a satisfying job (Cook 1975, Witte 1976, Monahan and Monahan 1977).

It should be clear that these three methods of describing environments overlap greatly and that some situational predictor items would fit equally well under any of the three rubrics. It should also be clear that situational variables are being proposed for use in addition to, rather than instead of, dispositional variables in actuarial or clinical prediction schemes. It is the interaction of dispositional and situational variables that holds the greatest promise for improved predictive accuracy. Ideally, it eventually might be possible to make differential predictions of the sort that an individual with dispositional characteristics of type *N* would have *X* probability of violent behavior if he resided in environment type *A*, and *Y* probability if he resided in environment type *B*. But in order to reach this nirvana of prediction, it will be necessary for researchers to begin the arduous task of compiling and verifying a catalog of situations that relate to the future occurrence of violent behavior. The three nonexclusive approaches to conceptualizing human environments reviewed above could provide a framework for deriving specific predictor items that could then be applied to a cohort of prisoners or mental patients about to be released from institutions and validated during follow-up periods by the multiple methods specified previously.

V. CONCLUSION

We have examined the research to date on the prediction of violent criminal behavior and suggested several ways in which research in the future might improve upon it. The prediction of violence is an area of intrinsic scientific interest and policy importance as well.[7] In the latter regard, it is well to keep in mind that improvements in prediction technology can inform but not determine public policy. The risks must be borne by the false positives who languish in institutions and the victims of false negatives who lie in the streets. It is a rare prisoner who will accept with equanimity the explanation that he must be denied parole because the odds are one-in-three that he will be violent upon release. It is an even rarer victim of violent crime who will care to listen

[7]The policy implications of prediction research have been addressed in von Hirsch (1972), Dershowitz (1973, 1974), Wilkins (1975), Shah (1976, 1977), Wexler (1976), Fagin (1976), Dix (1976), and Monahan (in press [b]) in addition to the references cited previously.

to a treatise on the difficulty of predicting low-base-rate events. The task of research is to provide the most accurate estimates possible of the relative risks to the individual and to society of various procedures for predicting violence. Their weighting remains, as it must, in the political process.

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DEFENSE EXHIBIT C

DEFENDANT'S EXHIBIT 3

Violent Crime: Prediction and Control

Beverly Koerin

Violent crime has become a major public concern, threatening many citizens' sense of well-being and involving tremendous national social and economic costs. The various professions involved in the study, rehabilitation, and control of violent offenders feel increasing public pressure to protect society from crimes of violence, primarily by incapacitating the offender.

Decisions to incarcerate or release offenders are often based on individual predictions of future violent behavior. Recent public policy concerning career offenders represents an attempt to protect society by evaluating collective probabilities of future violent behavior.

This paper examines the growing concern over violent crime, the prediction techniques that have been used to determine the disposition of an offender, the tendency toward overprediction documented by various research studies, and recent public policies enacted to curb crimes of violence. Finally, balancing individual rights and the rights of society in light of public attitude and public policy involves several moral and ethical questions.

Public outrage at the incidence of violent crime has caused professionals to intensify their efforts to discover causes of crime, develop techniques for predicting individual violent behavior, and enact public policy to control violent offenses. However, correlates or causes of crime are difficult to translate into public policy—prediction techniques are not entirely reliable and public policy is as much influenced by public mood and political considerations as it is by empirical evidence of crime causation and control. Moreover, moral and ethical issues are inherent in attempts to predict and control violence. Research by sociologists, psychiatrists, and lawyers tends to support this evaluation.

INCIDENCE OF VIOLENT CRIME

The President's Commission on Law Enforcement and Administration of Justice reported in 1967 that Americans are extremely concerned about crimes that threaten them personally: "The crimes that concern Americans the most are those that affect their personal safety—at home, at work, or in the

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streets."[1] That crime continues to be a major national concern is evident in current political speech making and news reports.[2]

Between 1960 and 1968, the national rate of criminal homicide per 100,000 population increased 36.7 percent; for rape the rate increased 65 percent; and in the case of aggravated assault, 67 percent.[3] James Q. Wilson notes that by 1972 the murder rate in this country had risen higher than at any time since 1936.[4] However, a second glance at the statistics reveals that willful homicide, aggravated assault, forcible rape, and robbery "represent only 13% of the FBI Index of Reported Serious Crime."[5] The odds are 1 in 20,000 that a person will die from willful homicide, and 1 in 3,000 that a person will require hospitalization because of injuries suffered during an assault.[6] Despite the low odds, many people continue to live in fear, because "generally held perceptions of reality can be at least as important as reality itself in the way they influence a person assessing his own well-being."[7] A survey revealed that 50 percent of the women and 20 percent of the men in the United States are afraid to walk outside at night, even in the vicinity of their homes; one-third of American households contain firearms for protection against intruders.[8]

The threat of violent crime affects society as well as individual citizens—the costs of maintaining adequate police protection, courts, and jails are increasing each year. Because of their fear of violent crime, many people alter their lifestyle. For example, they may avoid certain areas of town, thus increasing the likelihood of victimization in those areas,[9] or remain home after dark, thus disrupting formal and informal neighborhood and community ties and contributing to greater "atomization" of society.[10]

PREDICTION: USES, METHODS, AND FINDINGS

With the objective of reducing violent crime, professionals have tried to develop valid and reliable techniques for predicting potential dangerousness.

1. President's Commission on Law Enforcement and Administration of Justice, *The Challenge of Crime in a Free Society* (Washington, D.C.: U.S. Govt. Printing Office, 1967), p. 1.
2. "Losing Battle against Crime," *U.S. News and World Report*, Dec. 15, 1974; "Crime in America: One Nation's Journey into Fright," *PTA Magazine*, April 1974; "Crime Wave," *Time*, June 30, 1975.
3. Robert Winslow, ed., *Crime in a Free Society*, 2d. ed. (Encino, Calif.: Dickenson, 1973), p. 157.
4. James Q. Wilson, *Thinking about Crime* (New York: Basic Books, 1975), p. 7.
5. Winslow, *Crime in a Free Society*, p. 156.
6. Ibid., p. 48.
7. James Brooks, "The Fear of Crime in the United States," *Crime and Delinquency*, July 1974, pp. 242-43.
8. Winslow, *Crime in a Free Society*, p. 157.
9. Ernst A. Wenk, James O. Robison, and Gerald W. Smith, "Can Violence Be Predicted?" *Crime and Delinquency*, October 1972, pp. 393-402.
10. Wilson, *Thinking about Crime*, p. 21.

They have also tried to control dangerous behavior collectively. Within the criminal justice and mental health fields, judgments about dangerousness are constantly being made. In setting bail or ordering pretrial detention, judges base their decisions, in part, on an assessment of the danger the individual presents to the community. The length of an offender's sentence and his eligibility for parole are contingent on the offender's history of violence and on predictions of future violent behavior. Criminal or civil commitments to mental institutions rest on psychiatrists' diagnoses and prognoses of future dangerousness.

Two methods of prediction have been used: the clinical, case study method and the statistical, actuarial method. Don Gottfredson describes clinical assessment as a wide band procedure in which a broad range of information about the individual is gathered from sources such as interviews, social history, and projective testing. The statistical method, or narrow band procedure, considers a narrower range of factors evaluated as specifically related to criminal behaviors.[11]

Clinical methods have been used by psychiatrists, social workers, and parole staffs in evaluating the potential for violent behavior among patient or inmate populations. But violent crimes by former prison inmates or mental patients have undermined the reliability of clinical prediction. Dr. Michael Peszke contends that "prediction of danger is not within medical competence" and shouldn't be, and "physicians should not be expected to act as agents of society."[12] Edwin Sutherland and Donald Cressey, reviewing the research literature, assert that no single personality trait has "been found to be very closely associated with criminal behavior."[13] Confirming this observation, Manfred Guttmacher, a psychiatrist who studied the clinical histories of people who had committed homicide after having received treatment for mental disorder, states that he was

> unable to decipher . . . any symptoms which they presented in common that might act as warning signs of impending catastrophe. In large measure this is due to the fact that one cannot anticipate with accuracy social situations which the released . . . patient will have to meet.[14]

Nevertheless, the public continues to rely heavily upon clinical judgment.

Statistical prediction techniques evolved with the desire to improve predictive accuracy. A delinquency prediction scale developed by Sheldon and Eleanor Glueck has been the subject of considerable controversy. Holding age,

11. Don Gottfredson, "Assessment of Methods," in *Crime and Justice*, Vol. 3, Leon Radzinowicz and Marvin Wolfgang, eds. (New York: Basic Books, 1971), pp. 362-63.
12. Michael A. Peszke, "Is Dangerousness an Issue for Physicians in Emergency Commitment?" *American Journal of Psychiatry*, August 1975, p. 828.
13. Edwin H. Sutherland and Donald R. Cressey, *Principles of Criminology* (Philadelphia: Lippincott, 1960), p. 135.
14. Jonas R. Rappeport, ed., *The Clinical Evaluation of Dangerousness of the Mentally Ill* (Springfield, Ill.: Charles C Thomas, 1967), p. 27.

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I.Q., and neighborhood constant, the Gluecks noted relationships between delinquency and several other variables: patterns of family stability, affection, and discipline. They then devised statistical or actuarial tables based on those factors to determine the probability of a juvenile's becoming delinquent. Their findings have been questioned because the sampling methods and prior knowledge of the subjects' status may have influenced their rating of the quality of family relationships.[15] Moreover, critics maintain that the Gluecks'—and others'—prediction tables do not truly individualize: They fail to account for many factors which may affect the individual indirectly. Prediction tables appear static; they seem to assume that no changes will occur in the personal or social conditions that might alter the prediction.[16] In countering these objections, the Gluecks assert that while prediction tables should be flexible enough to permit change, they cannot account for all factors having only an indirect relationship to criminal behavior. Statistical tools are meant to provide probabilities, not certainties. Used in conjunction with clinical methods, statistical tables provide a background for more competent individual treatment.

Numerous attempts have been made to devise statistical tables to predict parole success or failure or the probability that an individual will commit a violent offense. Most follow a similar procedure. First, criterion categories of behavior are established—what behavior is to be predicted and what procedure is to be used for classifying persons on the basis of behavior. Second, the characteristics which are expected to be closely related to the predicted behavior are selected and defined. The procedure is then tested on a representative sample of the target population to determine the relationships between the criterion categories of behavior and the predictor factors. Before applying the prediction procedure in the setting for which it was developed, these relationships are retested on a sample population to cross-validate the results.[17]

As noted above, statistical prediction studies have generally focused on parole success or failure and failure due to violent or nonviolent offense. Several factors have been found to be associated with these various behavioral outcomes. Recividists are likely to have been young at the time of first arrest and conviction, to have left home at an early age, to have committed nonviolent, economic crimes such as larceny, burglary, theft, or forgery.[18] A Virginia study noted that the risk of parole violation was highest among younger male offenders who had been sentenced to five or more years and had served at least three, who lacked an occupation or previous regular employ-

15. Alfred J. Kahn, "Public Policy and Delinquency Prevention," in *Crime and Justice*, Vol. 1, Radzinowicz and Wolfgang, eds., p. 417.

16. Sheldon Glueck and Eleanor Glueck, *Predicting Delinquency and Crime* (Cambridge, Mass.: Harvard University Press, 1960), pp. 144-49.

17. Gottfredson, "Assessment of Methods," p. 347.

18. Daniel Glaser, *The Effectiveness of a Prison and Parole System* (Indianapolis, Ind.: Bobbs-Merrill, 1969).

ment, had more than three children, and who had prior records of recidivism.[19] Offenders who committed crimes against persons appeared to be better parole risks than those who committed crimes against property.[20] This is due, in part, to the fact that crimes of violence are frequently situational crimes of passion committed by otherwise law-abiding citizens. Yet "the greatest proportion of all serious violence is committed by repeaters who have committed less serious offenses in the past."[21]

Given these factors associated with recidivism and with violent behavior, how accurate have prediction techniques been? Hermann Mannheim and Leslie Wilkins reported that their use of statistical prediction based on statistical classifications of failure-likely and success-likely groupings proved to be twice as accurate as clinicians' "intuitive" judgment.[22] This may be because the primary variable in the case study method is the clinician or prognosticator himself.[23] The researcher is less likely to be a variable when the factors related to the behavior in question are discrete: prior offenses, age of first offense, and type of offense, rather than "quality" of family relationship. Lloyd Ohlin suggested that the "greatest increase in predictive accuracy will undoubtedly depend on securing better factors rather than on refining the techniques and methods of predictive work."[24]

RELIABILITY OF PREDICTION: FOLLOW-UP STUDIES

Various studies have been done which indicate the reliability of techniques for predicting violent offenses. The Parole and Community Service Division in the California Department of Corrections sponsored research to evaluate techniques of violence prediction. The division obtained violence histories on parolee subjects, placed them in six distinct categories based on past aggressive behavior, and assigned those in the two most aggressive categories to special supervision units with relatively small caseloads. One in five of the parolees studied was classified as aggressive; the subsequent rate of crime involving violence was 3.1 per 1,000 cases, compared with 2.8 per 1,000 cases for those classified as less aggressive. The difference is of little statistical significance.[25]

19. Elmer H. Johnson, *Crime, Correction and Society* (Homewood, Ill.: Dorsey Press, 1966).
20. Gottfredson, "Assessment of Methods," p. 360.
21. Winslow, *Crime in a Free Society*, p. 161.
22. John P. Conrad, *Crime and Its Prevention* (Berkeley, Calif.: University of California Press, 1970).
23. Daniel Glaser, "The Efficacy of Alternative Approaches to Parole Prediction," *American Sociological Review*, June 1955, p. 284.
24. Daniel Glaser, "A Reconsideration of Some Parole Prediction Factors," *American Sociological Review*, June 1955, p. 335.
25. Wenk et al., "Can Violence Be Predicted?" pp. 395-98.

After evaluating dangerousness in convicted offenders, Harry Kozol, Richard Boucher, and Ralph Garofalo followed up their research to assess predictive accuracy. Dangerousness was defined as "the potential for inflicting serious bodily harm on another."[26] Over a ten-year period, the researchers studied 592 convicted male offenders, a majority of whom had committed sex offenses, some involving extreme violence. The criteria for evaluating dangerousness included previous attempts to inflict serious injury on another, anger, hostility, displayed or suppressed resentment, enjoyment of others' suffering, little or no compassion for others, irritation with or rejection of authority, sense of being a victim, inability to tolerate frustration, inability to delay satisfaction or control impulses.

The subjects were evaluated by at least two psychiatrists, two psychologists, and one social worker; a detailed life history was completed in each case; and all subjects underwent psychological testing. The clinicians obtained detailed descriptions of the actual assault—as perceived by the victim and as perceived by the offender. After evaluating all data, the clinicians recommended that some of the subjects be released; others were determined to need further psychiatric treatment. The predictions were reasonably accurate. The recidivism rate for serious assault was 34.7 percent for those released against the research team's advice, compared with only 8 percent serious assault recidivism by those released with the team's consent. However, as should be apparent from the above statistics, 65 percent of those not recommended for release did *not* commit a serious offense.

Herein lies the difficulty in most prediction techniques: Violence appears to be vastly overpredicted by both statistical and clinical methods.[27] Findings from several studies support this observation. The California Department of Corrections devised a violence predictor scale, using as variables the number of previous offenses, length of imprisonment, drug use, and present commitment offense. On the basis of these factors, the researchers isolated a group of offenders who were three times more likely to commit a violent act than the general parolee population. Yet 86 percent of those in the high risk group did *not* commit a violent offense while on parole.[28]

In another California study, the records of violence for 400 wards of the California Youth Authority were examined. The subjects were diagnosed by psychiatrists, tested by psychologists, and followed up by the research team for fifteen months after release. The team collected information on 100 variables and attempted to analyze the data retrospectively to determine which factors might be predictors of violent recidivism. Using statistical

26. Harry L. Kozol, Richard Boucher, and Ralph Garofalo, "The Diagnosis and Treatment of Dangerousness," *Crime and Delinquency*, October 1972, pp. 371-92.

27. John Monahan and Lesley Cummings, "Social Implications of the Inability to Predict Violence," *Journal of Social Issues*, March 1975, p. 153.

28. Ibid., p. 155.

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lyses of the variables, the researchers predicted eight to one false to true positives. The parole officers, using history of violent behavior as the only factor, predicted nineteen false positives in every twenty.[29]

CURRENT PUBLIC POLICY AND IMPLICATIONS

Obviously, the ability to predict violent behavior statistically or by clinical evaluation is grossly imperfect. Nevertheless, "much of current policy in the area of mental health and criminal justice is based on the supposition that psychologists and psychiatrists can actually predict those who will be physically violent to another."[30] Dangerous offender statutes and recommendations of the American Law Institute maintain legal reliance on the illusion of predictive accuracy. Washington, D.C., enacted into law in 1970 a provision for pretrial detention of a person "charged with a dangerous crime if the government . . . certifies there is no condition or combination of conditions which will reasonably assure the safety of the community.[31] Over half the jurisdictions in the United States have adopted dangerous offender laws, often including or restricted to sex offenders. Such legislation follows the recommendation of the Model Sentencing Act and requires that legal identification of the offender as dangerous must be based on a psychiatric diagnosis of the offender as mentally abnormal.[32]

Norval Morris asserts that "prediction of future criminality is an unjust basis for determining that the convicted criminal should be imprisoned."[33] Yet he recognizes that this is a politically astute tactic in light of public demands for safety and security.[34]

The American Law Institute Model Penal Code recommends the sentencing professional, disturbed, *dangerous*, and multiple offenders to extended terms of imprisonment. In 1973, the Task Force on Corrections of the National Advisory Commission on Criminal Justice Standards and Goals likewise recommended terms of from five to twenty-five years for professional criminals, habitual felony offenders, and *dangerous offenders*. The commission admitted that lengthy sentences for the dangerous and habitual offender might provide political leverage in obtaining legislative approval for shorter sentences, fines, and community-based care for the majority of less serious offenders.[35]

29. Ibid.
30. Ibid., p. 153.
31. Kozol et al., "Diagnosis and Treatment of Dangerousness," p. 373.
32. Monahan and Cummings, "Social Implications of the Inability to Predict Violence," p. 374.
33. Norval Morris, "The Future of Imprisonment: Toward a Punitive Philosophy," *Michigan Law Review*, May 1974, p. 1162.
34. Ibid., p. 1169.
35. Ibid., pp. 1165-66.

But a disturbing question remains unanswered: If violence prediction is not accurate, how many persons are suffering the loss of their civil rights because of invalid overpredictions? In *Baxstrom* v. *Herold*, the United States Supreme Court ruled that persons committed to institutions for the criminally insane had been denied their right to due process if they were hospitalized beyond the length of the sentence for their offense. As a result, New York State released or transferred to ordinary mental hospitals many "dangerous" offenders. Follow-up studies after release revealed that only 3 percent of these offenders returned to correctional institutions or hospitals for the criminally insane, and 55 percent of the men and 43 percent of the women had no readmissions to mental hospitals.[36]

Ironically, while uncertain prediction techniques jeopardize the rights of some people, the very uncertainty may be deterring greater invasion of human rights. "Confidence in the ability to predict violence serves to legitimate intrusive types of social control."[37] If prediction techniques were accurate and reliable, early intervention—before the occurrence of a violent act—might be justified. A psychiatrist serving as consultant to the National Commission on the Causes and Prevention of Violence recommended a nationwide psychiatric testing program of all six year olds, followed by widespread treatment of those judged to be criminally inclined. The issues raised by this suggestion involve the constitutionality of enforced treatment and the potential stigmatizing and labeling effect of such a predictive testing program.[38]

The difficult facts confronting the criminal justice system are as follows:

1. Violent crime represents a threat to individuals and to society.
2. Prediction techniques are not completely accurate.
3. Public demands for crime control are intense.

In view of this, what can be done to reduce the amount of violent crime? Sutherland and Cressey recommended that we protect society and prevent crime and delinquency by—

1. Providing relatively permanent segregation of those individuals who have shown themselves to represent the greatest menace to society.
2. Providing "nonalienating" treatment of offenders whose values are basically anticriminal.
3. Defining the types of social and personal factors associated with crime to allow for preventive intervention.[39]

In view of the fact that defining "anticriminal values" and "social and personal factors" is extremely difficult, many recent programs have focused on

36. Ibid., pp. 1169-70.
37. Wenk et al., "Can Violence Be Predicted?" p. 402.
38. Monahan and Cummings, "Social Implications of the Inability to Predict Violence," pp. 160–61.
39. Sutherland and Cressey, *Principles of Criminology*, pp. 590-91.

utherland and Cressey's first recommendation: permanent segregation of recidivists. Research has suggested that most serious criminal offenses are committed by repeat offenders. Marvin Wolfgang's studies of crime by Philadelphia youth indicate that the 6 percent who had committed five or more offenses before the age of eighteen were responsible for two-thirds of all violent crime committed by the study population.[40]

While dangerous offender legislation relates primarily to segregation of violent or sexual offenders and requires psychiatric diagnosis of dangerousness, career offender programs attempt to segregate for as long as possible habitual offenders whose past offenses may not necessarily have been violent. The federal government initiated an experimental program in eighteen major cities in 1975 to boost the conviction rates of habitual or "career" offenders by augmenting the salaries of prosecuting attorneys who carry smaller-than-average caseloads of career offenders and who remain on the case from the outset to the final disposition. Under this program, those prosecuting the career criminal are able to obtain a speedier trial by going directly to the grand jury, bypassing the preliminary hearing; and they seek indictments for the most serious felony charge rather than plea bargaining in exchange for a guilty plea. Critics of the program express concern about the "career offender" label and its impact on the judges, suggesting that the label may tend to contradict the presumption of innocence. Moreover, critics assert that providing funds to the prosecuting attorney's office may jeopardize the legal rights of impoverished offenders unless comparable funds are granted to public defender programs.[41]

CONCLUSIONS

An enormous volume of information has been compiled in causal and predictive studies of violent behavior. Much of what we now know may be of great potential value. But there appears to be a dilemma inherent in determining how the knowledge is to be used in light of ethical and legal considerations. Our predictive variables must be refined; yet, even so, prediction techniques are designed to predict *probabilities*. Will decisions based on clinical or statistical predictions ever be foolproof? I remain skeptical of that possibility.

Our treatment of dangerous crime reflects the "persistent punitive attitude of the general public toward criminals."[42] This is a disturbing notion because it may portend an erosion of civil rights and legal protections in criminal

40. John Irwin and Lewis Yablonsky, "The New Criminal: A View of the Contemporary Offender," in *Crime in America: Perspectives on Criminal and Delinquent Behavior*, Bruce J. Cohen, ed. (Hasco, Ill.: F. E. Peacock, 1970), pp. 199-200.

41. Timothy D. Schellhardt, "Experimental Program Musters Legal Forces against Repeat Offenders to Boost Convictions," *Wall Street Journal*, Aug. 19, 1976, p. 28.

42. Gresham M. Sykes, *Crime & Society* (New York: Random House, 1967), p. 194.

justice and other aspects of public life. We must follow up recent dangerous offender and career criminal laws and programs to assess their deterrent value and their effect on the rate of violent crime. Current data related to crime causation are applicable to public policy in only a small way; future reliance on prediction appears inevitable yet should be approached carefully. Do we fully understand the chilling effect dangerous offender and career criminal laws may have on attitudes toward and protection of individual rights?

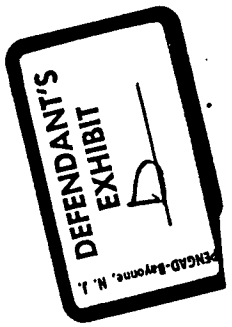
Referring to the federal program on career criminals discussed above, one proponent commented: "Our aim is to put a Bandaid on the spot that's hurting."[43] If we seek to treat crime effectively, we must attack social problems such as poverty and unequal access to opportunities—conditions which may contribute to violent behavior. Elimination of poverty and racial discrimination should be national goals grounded in moral and humanitarian values; however, if humanitarian ideals are not a strategically "sound" political platform, policy makers should attempt to win public support for such goals on the basis of the economic and social costs of these conditions. I believe that policy makers must, at the very least, apply iodine to the wound before the Bandaid.

43. Schellhardt, "Experimental Program," p. 28.

DEFENSE EXHIBIT D

4

INSTITUTIONAL AND POST-RELEASE BEHAVIOR OF THE TEXAS FURMAN-COMMUTED INMATES



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ABSTRACT

In 1972, the United Supreme Court ruled that the death penalty as administered constituted cruel and unusual punishment. This ruling also invalidated the death sentences of over 600 inmates in the United States. These inmates had their death sentences commuted to life imprisonment. This paper examines the institutional and post release behavior of the 47 Furman commutees in Texas from 1973-1986. Prior to the release of these 47 inmates into the general prisoner population, prison officials and clinicians predicted that the commutees were dangerous and constituted a substantial threat to other inmates and security staff. The institutional and release behavior of these ex-capital offenders is compared to a cohort of like violent offenders. Subsequent data analysis revealed that the commutees committed few serious prison rule violations. They did not kill other inmates or staff. A minority of the commutees and cohort members committed the majority of prison rule violations. Of the thirty-one commutees released on parole, one committed a new homicide. No cohort inmate killed again. The paper concludes that execution of these 47 inmates would not have greatly protected society.

In 1972, the United States Supreme Court decided in Furman v. Georgia, 408 U.S. 238 (1972) that the death penalty as then imposed constituted cruel and unusual punishment in violation of the Eighth and Fourteenth Amendments. This landmark decision invalidated the death sentences of more than 600 death row prisoners scattered across 30 states and the District of Columbia (1). The former death row prisoners had their sentences commuted to life imprisonment and, after subsequent processing, were released into the general prisoner population.

Critics of the ruling feared that the public would be endangered by the former death row prisoners if they were ever released. Prison administrators and mental health professionals warned that the Furman-commuted inmates posed a significant threat to the general prison population, and if paroled, to the community at large. Some reasoned that these inmates had "over time become progressively less suitable for reentry into a general prison population or the general public" (see Gallemore and Panton, 1971:171). The underlying logic for their argument centered on the complex (and controversial) issue of "dangerousness" (e.g. Floud and Young, 1982). Advocates of capital punishment often cite long-term violence and "dangerousness" as justification for

the death penalty. Sellin summarizes this position:

> Supporters of the death penalty claim this punishment is a superior means of saving lives, because if a capital murderer were sentenced to life imprisonment, he may some day kill a fellow prisoner or member of the prison staff, the assumption being that he is, more than a prisoner sentenced for some other crime, prone to homicidal violence; and, if at some future time he were pardoned, paroled, or otherwise released from confinement, this presumed compensity might lead him to kill again. (1980: 103)

The Furman decision represents an opportunity, a natural experiment, to test this latter position. However, social scientists have almost totally ignored the institutional and post-release behavior of the Furman inmates (see Vito and Wilson, 1986). The fate of these inmates may tell us something crucial about recidivism, predictions of dangerousness and future violence, and the appropriateness of long-term confinement (incapacitation) of violent offenders in maximum security institutions. Most importantly, the natural experiment created by Furman offers a unique chance to examine the validity of specific deterrence arguments so often used by capital punishment advocates.

The present study examines the Texas Furman-commuted population (N= 47) over the fourteen year period, 1973-1986, following their release from death row. We are especially interested in whether or not the Furman inmates presented a threat to the lives of others, including the prison staff, other inmates, and members of the community. To test the issue of dangerousness, we compare the Furman group to a control group (N= 156) of violent offenders who were

convicted of murder, and rape, and received life sentences. The point of the comparison group is to assess whether the people we decide to execute constitute a more violent threat than those sent to prison for life for convictions of similar offenses.

Data on institutional and parole behavior are examined to determine if the Furman-releasees, as compared to the control group, did in fact inflict injury upon others after their reprieve. First, we review the relevant literature on commutation studies. Then, we present and analyze the institutional and release data. Finally, we compare the release data reported in this paper to the findings of other recidivism research on murderers. The available literature is used as a bench mark for comparative purposes.

THEORETICAL BACKGROUND

Many offenders who receive the death penalty have their sentences commuted before being executed. Radelet and Pierce (1985) found that only a fraction of convicted murderers are ever executed. Studies have shown that commutations, or "reductions in the severity of sentence(s) imposed by court(s)" (Martin, 1983: 594), occur in a substantial proportion of capital cases. Johnson (1957), for example, found that in North Carolina between 1909 and 1953 only 24% of first-degree burglars, and 56 percent of both murderers and rapists sentenced to death were actually executed. In

Texas between 1924 and 1952, five of eight robbery cases were commuted, 21 percent of the murder cases, and 7 percent of the rape cases; of the total 350 persons sentenced to death during this time period, 19 percent were commuted (Giardini and Farrow, 1952). In updating this Texas data, we found that between 1924-1964 (the pre-Furman execution era) 453 offenders were sentenced to death, of which 366 were executed, and 87 (19%) received commutations.

COMMUTATION STUDIES

Not all offenders sentenced to death are actually executed. A minority receive, for whatever reasons, commutations of their death sentences, to a less severe sentence-- usually life imprisonment. However, very little empirical research has been conducted on commuted ex-capital offenders. Of the few commutation studies completed, focus tends to be on the demographic differences between condemned and commuted populations (Johnson, 1957; Wolfgang, Kelly, and Nolde, 1962).

Research on the institutional behavior of commuted capital offenders is nonexistent; however, some studies have been conducted on the behavior of murderers in prison. Flanagan (1980) found that murderers generally had lower disciplinary infraction rates; but, when committing rule violations, these long-term inmates were more likely to commit serious rule violations. Overall, these inmates, when compared to other prisoners, tended to

be "settled" and the most manageable of prisoners (Wardlaw and Biles, 1980). Though some studies have examined first-degree murderers and prison homicides (Bedau, 1967; Sellin, 1980), these studies did not differentiate between those who were sentenced to death and later commuted and those who committed capital crimes but were not sentenced to death.

The critical question that remains unanswered is how commuted ex-capital offenders behave in prison and on parole. This question was partially addressed by two commutation studies that considered whether or not commuted offenders had recidivated. Stanton (1969) studied 63 convicted first-degree murderers between 1930 and 1961 in New York, 61 of which had been sentenced to death and later had their sentences commuted. His major finding indicated that only three of the 63 returned to prison by the end of 1962, two for technical violations of parole and one for a new felony, burglary. Giardini and Farrow (1952) gathered data on commuted and paroled capital offenders in 22 states over periods ranging from 1 to 38 years. Of the 197 ex-capital cases paroled, 129 were still on parole, 34 had completed parole, 11 died, 5 absconded, 7 violated parole by breach of rules, and 11 (6%) committed new offenses. Giardini and Farrow warn of the incompleteness of their data and of drawing conclusions from it.

Only one study in recent years has tracked Furman-commuted inmates (Vito and Wilson, 1986). They

addressed the issue of whether or not 17 paroled Kentucky inmates, out of 23 commuted as a result of Furman, recidivated. They found that 5 of the 17 (29%) returned to prison, 2 for technical violations, 1 for burglary, and 2 for robbery. None committed another homicide in prison or while on parole. However, these researchers failed to examine institutional behavior. It is our opinion that in-prison violence is the critical factor that most directly affects release behavior. With limited exceptions and incomplete data, the question of how commuted offenders behave in prison and on parole has been left unanswered. Considering the numerous issues that surround the death penalty, this gap in the literature on capital punishment seems startling.

FURMAN v. GEORGIA: A NATURAL EXPERIMENT

The Furman v. Georgia decision presents an opportunity to observe the effects of a natural or after-the-fact experiment-- a court decision which resulted in the release of capital offenders to the general prison population and some, eventually, to the free society. This study is in the tradition of such legal impact studies as Eichman's (1966) research on the consequences of the historic Gideon v. Wainwright, 372 U.S. 335 (1963) decision which demonstrated that the release of hundreds of prisoners in Florida did not trigger, as predicted, a major crime wave. The present study

is also similar to an assessment of the effects of the court order issued in **Ruiz v. Estelle, 503 F. Supp. 1265 (S.D. Texas, 1980)** on levels of violence and disorder in Texas prisons, which found that the court order initially led to a breakdown in the traditional mechanisms of social control and precipitated an unprecedented wave of inmate violence (see, Crouch and Marquart, 1989; Ekland-Olson, 1986).

Especially relevant to this research is the work conducted by Terence Thornberry and Joseph Jacoby (1979), who examined the outcome of **Dixon v. Attorney General of the Commonwealth of Pennsylvania, 325 F. Supp. 966 (M.D. PA, 1971)** which led to the release of 586 patients from a maximum security hospital for the criminally insane. They hypothesized that these inmates would not be assaultive. In testing such variables as pre-release violence, postrelease recidivism and rehospitalization, support was found for their hypothesis. Though clinically predicted to be dangerous to themselves and others, these patients were not seriously assaultive during confinement and did not pose a threat to the community upon release. This study and its findings parallel an earlier study by Steadman and Cocozza (1974), which examined the effects of **Baxstrom v. Herold, 328 U.S. 107 (1966)**, litigation that resulted in the transfer of nearly 1,000 reputedly dangerous patients from hospitals for the criminally insane to civil mental hospitals.

The guiding hypothesis of the present research, based on the previously mentioned literature on the institutional

behavior and recidivism of murderers and the findings of Thornberry and Jacoby, is that the Furman inmates did not present a disproportionate serious threat to other inmates and prison staff while incarcerated and, if released, did not commit a disproportionate number of "dangerous" acts while in the free society. For the purposes of this paper "dangerousness" is defined as "serious assaultive conduct, defined as conduct which does, or is reasonably likely to, cause significant injury to the victim" (Dix, 1980: 530-531).

DATA SOURCES

The first task of this research was to identify the Texas Furman inmates. The Classification Office in the Texas Department of Corrections (TDC) maintains a death row file which contains the personal histories, classification workups, appeals documents, photographs, commitment papers, and death certificates (of those executed) of all inmates sentenced to death in Texas. These files began in 1924 and continue to the present.(2) We reviewed these records and identified the Furman inmates by a special commutation document in their files signed by the Governor.

Furman inmates received their commutations between June 1972 and January 1973. The NAACP-Legal Defense Fund identified 52 Furman inmates in Texas. However, this research deals with 47 Furman-commuted inmates, of which there were 37 murderers, 7 rapists, and 3 armed robbers. (3)

These inmates, verified by TDC's records, were physically present on death row at the time of the ruling. We did not consider those inmates with death sentences in county jails awaiting transfer to death row. Once commuted, they were processed, like all new inmates, through the TDC's Diagnostic Unit, and the majority sent to the Ellis, Eastham, Darrington, Retrieve, and Ramsey I Units. These units were similar in that they housed older multiple recidivists with long histories of violence. According to Classification personnel present in 1973, TDC regarded the Furman inmates as highly dangerous due to their previous death sentence and in need of tight disciplinary control. It was this "prediction" of and "propensity" for violence that determined unit of assignment.

The comparison group consists of all 156 male inmates convicted of murder (n=128) and rape (n=28) sentenced to TDC for life imprisonment (based on 60 plus years) in 1973. These were the same offenses for which the Furman inmates were sentenced to death.(4) All 156 entered the general prisoner population in 1973 and were housed in the same penitentiaries as the Furman commutees. The researchers believe that the life sentence cohort represents the best possible comparison group for the following reasons: (1) both groups were convicted of murder and rape; (2) both were sentenced to life imprisonment; (3) they entered the general prisoner population in 1973; and (4) both had a percentage released to the free society between 1973-1986. (5)

Data on institutional behavior were gathered from the inmates' prison records. We were specifically interested in the inmates' institutional disciplinary histories. TDC has three types of rule violations: Level 1, Level 2, and Level 3. Level 1 offenses are such serious violations as fomenting riots or work strikes, escape, possession of a weapon, fighting with a weapon, attacking a guard, and aggressive sexual attacks. Level 2 offenses consist of such offenses as fighting, refusing to work, and possession of drugs or contraband, while Level 3 violations are very minor infractions (e.g., gambling, tattooing). A code sheet was developed to obtain each inmate's disciplinary history which noted the year of the offense and subsequent official punishment (e.g., loss of good time, solitary confinement, demotion in time-earning class). This research, however, focuses on Level 1 offensivity.

Post-institutional (recidivism) data for those inmates paroled were obtained from the Texas Board of Pardons and Paroles (BPP). The BPP maintains exhaustive records on parolees, much of which is computerized. From the BPP, we obtained data on whether or not the inmate had violated his conditions of parole. These records also delineated the type of violation-- a new felony and subsequent conviction, or simply a technical violation and when.

RESULTS

In the following sections, results of the analysis are presented: (1) current status; (2) demographic characteristics; (3) institutional behavior; (4) conduct on parole, including those returned to prison and why; and (5) a comparative analysis of recidivism data.

CURRENT STATUS

Over the course of 14 years, thirty-one Furman commutees were eventually released to the community, 28 being paroled, one discharged, one pardoned, and one case dismissed. Of those released, six were eventually revoked, three died, and 23 are still living in the community (includes one of the revoked offenders who has since been re-paroled). Sixteen inmates have never been released from prison; three died, and 13 are still incarcerated. As for the life sentence cohort, 109 have been released (47 have never been released) of which 18 returned to prison, 9 died, and 94 of these inmates are still in the free community.

DEMOGRAPHIC CHARACTERISTICS

Table 1 presents a frequency distribution of the general demographic characteristics of the Furman and life sentence cohort.

(Table 1 about here)

In many respects, the two groups are comparable in terms of these general characteristics. For both groups, the mean age in 1973 was similar, however, cohort offenders appear to be slightly younger than the commutees. In terms of race/ethnicity, over half of the life sentence and Furman inmates were black and Hispanic. The majority in both groups did not have a violent offense in their prior criminal history. Most important, none of the Furman inmates committed a previous homicide-- this includes second and third degree murder. They did, however, commit 4 prior robberies, 2 rapes, and 6 aggravated assaults. Though not statistically significant, the life sentence cohort did commit more violent previous offenses than the Furman commutees. These prisoners committed 7 prior murders, 7 rapes, 23 robberies, and 25 aggravated assaults. The prior rates of adult incareration for both groups were similar.

The only significant finding was time spent in prison. The former capital offenders spent nearly 10 years in the general population while the life sentence group averaged over 11 years. This difference was statistically significant. The reason for this finding centers on the amount of time Furman inmates spent on death row, an average of 4.5 years. One spent almost 11 years in the death house. Once they entered the general prisoner population, the Furman inmates were given credit for their time spent on the "row" as well as good time which for most hastened their release.

INSTITUTIONAL BEHAVIOR

The TDC regarded the Furman inmates as a dangerous and potentially disruptive group. The rate of disciplinary infractions among these prisoners offers an insight into how "dangerous" they were in reality over the past fourteen years, and are today. The following section examines Level 1 rule-breaking activity during the course of confinement.

Serious Rule Violations

Level 1 offenses are the most serious institutional rule violations and represent the best determinants of the extent of dangerousness to other inmates in the prison setting, as opposed to other infractions (e.g., gambling, disobeying orders, possessing of contraband, tattooing) considered by the staff to be merely annoying problems. Table 2 lists the eleven Level 1 offenses committed by the Furman group and cohort, and the frequency of their occurrence from 1973 through 1986.

(Table 2 about here)

Overall we found that 73% of the Furman and 70% of the cohort inmates committed no Level 1 infractions during their confinement. This is remarkable considering the average time spent in prison for both groups was roughly a decade. In addition, 93% of the commutees and 90% of the comparison group committed no assaultive weapons (aggravated assault and

fighting with a weapon) offenses while incarcerated in TDC. These data, besides contravening predictions of future dangerousness in the prison setting, certainly suggest a non-violent and non-predatory (physical ansd sexual) type of prisoner. Who then were the serious rule violators? Several studies have found that within a penitentiary (as in the outside community) a small group of prisoners accounts for a disproportionate amount of offenses (Fox, 1958; Ramirez, 1983; Wolf, Freinek, and Schaffer, 1966). This theory was tested to see if it held true for the Texas Furman and cohort inmates.

High Rate Offenders

Of the Furman-commuted prisoners, 12 (9 murderers and 3 rapists) were responsible for the 21 Level 1 offenses. In fact, 1 inmate, a murderer, committed 6 of these serious infractions. Among the cohort, 47 committed the 116 offenses, with 1 committing 14, and another 17. Over the 14 year period, the 12 Furman Level 1 rule violators committed an average of 14.3 disciplinary infractions (Levels 2 and 3) per inmate compared to the non-Level 1 violators who committed an average of just 4.1 disciplinary infractions per inmate. The offending rate of Level 1 offenders was 3.5 times that of the other Furman inmates. Similarly, the 47 life sentence Level 1 violators committed an average of 14.3 infractions per offender compared to the non-Level 1 offenders, who committed an average of 4.3 offenses. These

data show how alike the two groups were in terms of serious rule breaking activity in prison. Furthermore, the contention of previous researchers that the group of inmates who violate the most serious institutional rules are also over-represented in lesser misconduct categories held true in this research as well. (see, Flanagan, 1980)

The high-rate offenders in both groups were slightly younger (25 for the Furman and 28 for the cohort) than the other inmates. They also consisted overwhelmingly of minorities. Among the 12 Furman high rate offenders, nine were black, two were Hispanic, and only one was white, compared to their representation within the group-- 43 percent white, 46 percent black, and 11 percent Hispanic. Among the life sentence cohort, the 47 high rate offenders were primarily minority inmates (68% black, 11% Hispanic, 21% white). The majority of high rate offenders in both groups (compared to the non-Level 1 violators) had not been incarcerated in TDC or other prisons prior to this term. Thus, it seems that this small group of inmates, accounting for the bulk of serious disciplinary infractions, had difficulty adjusting to the general prison environment.

In summary, the data indicate that a small percentage of inmates were involved in Level 1 offenses over the 14 year period. Perhaps most significant is the fact that no inmates from either group committed or were implicated in a prison homicide. The Furman inmates, as compared to the life sentence cohort, were not unusually disruptive or rebellious,

nor did they pose an disproportionate threat to other inmates and staff, as had been previously predicted by clinicians and administrators. These findings on the institutional behavior are consistent with the research of Thornberry and Jacoby (1979).

Conduct in the Free Community

In an earlier section it was noted that at some point prisoners from both groups had been released from prison. Table 3 reports the frequency distribution of those released and returned to prison.

(Table 3 about here)

Considering the small number of inmates who recidivated, the groups appear to be somewhat similar. Though the Furman inmates had a higher return rate than the cohort, this can be attributed to a longer release or risk period. Excluding the the technical violations, the data indicate that 94% of the life sentence cohort and 86% of the Furman releasees did not commit a new felony while in the free community.(6) As found in most recidivism studies, the period immediately following release is the most critical time for committing new offenses or violating parole rules. Seventy-five percent of the Furman recidivists recidivated within the first two years of their initial release. Sixty-one percent of the cohort recidivists returned to prison within two years.

Since Furman, states have only executed offenders convicted of capital murder. The current Texas capital sentencing scheme includes a "future dangerousness" provision. That is, jurors must unanimously conclude that the offender will commit future acts of violence (specifically homicide) to hand down a sentence of death. Table 4 is a more restricted comparison which lists recidivism data for **murderers only** from both groups.

(Table 4 about here)

Although recidivism rates for the murderers were low, one inmate in the Furman group committed another homicide while on parole. This act, committed in 1985, occurred within twelve months of his release from prison. He murdered his girlfriend and then committed suicide. An interesting finding of this research was that none of the released life sentence murderers committed an additional homicide. In short, of a total of 109 released murderers (both groups combined), one committed another homicide in the course of 14 years-- both inside prison and in the free community.

Comparison to Other Studies

In the following analysis, we compare our recidivism results for the murderers only to four other first-degree murderer-recidivism studies. These studies serve as a baseline for comparison to illustrate that the Furman inmates

did not have an extraordinarily high recidivism rate. The small sample of Texas inmates makes statistical comparison difficult; however, some broad generalizations can be made about the Furman inmates when compared to existing research. It is apparent that the rates of recidivism we observed among these inmates are quite similar to the research conducted by Donnelly and Bala (1984), Wallerstedt (1984), Bedau (1982), and Vito and Wilson (1986).

(Table 5 about here)

Based on these prior research findings and compared to the cohort data, the Furman-commuted murderers did not present a proportionately greater threat to the community; only four of the 21 inmates released (19%) were returned, or in one case would have been returned, to prison in fourteen years. Of these four, only 1 committed a second homicide. If speaking of recidivism in the sense of recommission of the crime for which the person was initially imprisoned, only 1 of the 21 released Furman murderers recidivated; that is one true positive (predicted to be dangerous and was dangerous) and 20 false positives. The predictions by administrators and clinicians that these individuals would wreak havoc if released to the community did not occur. Only a very small percentage of those predicted to be dangerous actually carried out additional serious felonies. It is worth noting that in a sample of 239 male British lifers, that 2, less

than 1%, committed a second homicide while on "license" in the free society (see Coker and Martin, 1985).

CONCLUSIONS

This article analyzed the institutional and post-release conduct of a group of capital offenders "freed" by a historic Supreme Court decision in 1972. These inmates were labeled as "dangerous" and predicted to be a continuing threat to society. The evidence reviewed in this article found that whether in prison or in the free society, the vast majority of these ex-capital offenders (as compared to a like group of violent criminals) did not engage in numerous serious assaultive or predatory acts over a prolonged period. Those commuted proved to be no more dangerous in the prison setting than the life sentence prisoners. Few prisoners in both groups committed assaultive weapons offenses against other prisoners. The majority rarely sought to escape, fomented rebellion, or attacked correctional personnel. They did not commit a prison homicide. The predictions of future dangerousness among the ex-capital offenders in the prison environment did not materialize. Most were model inmates during their confinement. These findings closely parallel those of Thornberry and Jacoby's (1979) research on ex-criminally insane mental patients eventually released to the free society.

Thirty-one of the commutees (including the 3 armed robbers) were eventually released into the free community. The data indicate that the majority of released commutees did not recidivate. Four releasees committed new felonies-- 1 murder, 1 rape, and 2 burglaries. To some, this second killing may be "too many" and beyond any "acceptable" level or rate of violence. However, twenty-three Texas Furman inmates are, as of this writing, still on parole. Several have been on parole for more than a decade, without incident. Further, there was little difference in the institutional and release behavior between those offenders we once decided to execute versus a group of like offenders sentenced to prison for life. These so-called "successes" or false positives demonstrate the futility in trying to predict future dangerousness. Current capital sentencing schemes that include a future dangerousness or continuing threat provision are especially suspect (see Dix, 1977).

In summary, the findings from this research have strong implications for those who advocate specific deterrence to justify capital punishment. Our data suggest that executing the offender to protect society is not a valid response to violent crime or a legitimate sentencing policy. Indeed, nearly all the released Furman inmates proved to be good "risks" in the free community. Furthermore, life without parole statutes, specifically designed to protect society, are also seriously called into question. All ex-capital offenders, or violent offenders in general, certainly do not

make good release risks. Yet, executing 47 inmates to prevent 1 additional homicide seems to be an extraordinary measure, and based on overpredictions of secondary violence. The ex-capital offenders in Texas were not, as a group, a significant or disproportionate threat to society when compared to similar offenders. To continue to treat them as such will only preserve the myth that they are a distinct and unique menace to the free community. Execution in this instance would not have greatly protected society. We are left with one conclusion: execution would have served only one goal-- retribution. Research on capital punishment is voluminous but certainly not exhaustive. More systematic research on the Furman and those commutees under current capital sentencing schemes is sorely needed.

NOTES

1. The exact number of inmates that were on death row at the time of the Furman ruling is not clear. Doug Lyons' list compiled for the NAACP-Legal Defense Fund contains 613 inmates, while Greenberg (1982) states that there were 629 inmates on death row at the time of the ruling.

2. For an historical overview of capital punishment in Texas (1924-1968), see Rupert C. Koeninger (1969).

3. In (1), different estimates of the number of death row inmates commuted by the Furman decision nationwide were mentioned. In individual states, the number of inmates released by the decision have also differed from Lyons' list. While Lyons' list contains 102 inmates supposedly on Florida's death row at the time of the Furman decision, Radelet, in a preliminary analysis found 96. Similarly, in Texas, 47 inmates were verified by institutional records as being present on death row at the time of the ruling. The overestimate by Lyons may have been caused by including some persons who were still awaiting transfer to death row in county jails.

4. The results in the following sections are based only on murderers and rapists. We collected data on 80 armed robbers in the life sentence cohort. However we have excluded the armed robbers from this analysis. To introduce the armed robbers into the analysis (both Furman and those sentenced to life) would have confounded the results due to the sheer size of the cohort robbers. Moreover, the armed robbers in the cohort represent a different type of criminal-- a career criminal who most likely would not have been sentenced to death under the pre-Furman Texas death statute. In addition, all 3 Furman-robbers have been released, have not returned, and did not commit any Level 1 rule violations.

5. We did not engage in sophisticated matching techniques or multivariate analysis because the populations sizes were dangerously small, which also tends to diminish the ability to make simple comparisons of percentages (Farrington, 1979).

6. There is, however, a limitation to this release data. That is, our findings on recidivism pertain only to known or official encounters with law officers. We do not know the extent to which the Furman-releasees and cohort members committed offenses or violated parole conditions and were not detected. It is possible these ex-prisoners committed "hidden" felonies.

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Table 1. DESCRIPTION of the GROUPS

Characteristics	Furman (N=44)	Life Sentence Cohort (N=156)	Test of Significance
Offense			χ^2 = .01
Murder	84.1%	82.1%	
Rape	15.9	17.9	
Race/Ethnicity			χ^2 = .22
Black	45.5	49.4	
White	43.2	39.7	
Hispanic	11.4	10.9	
Mean Age in 1973	32.2	29.9	T= 1.51
Mean Years in Prison	9.9	11.3	T= 2.08*
Prior UCR Violent Offenses			T= 1.14
0	79.1	69.3	
1-2	20.9	28.7	
3 or more	0	2.0	
Prior Adult Incarcerations			T= .57
0	65.9	63.4	
1-2	27.3	26.1	
3 or more	6.8	10.5	

*Significance levels were determined as appropriate by chi-squares or T-tests and *p < .05.

Table 2. NUMBER of SERIOUS INSTITUTIONAL RULE INFRACTIONS

Offense	Furman (n=47)	Life Sentence Cohort (n=156)
Inmate-Inmate Offenses		
Fighting with weapon	1	19
Aggravated assault on an inmate with a weapon	2	11
Aggravated assault on an inmate	0	6
Sex by force	0	2
Inmate-Guard Offenses		
Striking a guard	2	8
Attempting to strike a guard	0	3
Threatening a guard	5	19
Offenses Against Prison Order		
Escape/Attempts to escape	0	6
Mutiny	1	5
Possession of weapon	7	16
Sex misconduct	3	21
Total offenses	21	116
Number of inmates involved	12 (25%)	47 (30%)

TABLE 3. TOTAL RECIDIVISM BY GROUP

Release Outcome	Furman	Life Sentence Cohort
Total Released	28 (64%)	109 (70%)
Mean Time in community	4.1 yrs	3.0 yrs
Recidivated*	7 (25%)	18 (17%)
Technical Violations	3 (11%)	12 (11%)
New Felony Offenses	4 (14%)	6 (6%)
Murder	1	0
Rape	1	1
Robbery	0	1
Burglary	2	4

*Recidivism is based on return to prison.

TABLE 4. RECIDIVISM OF MURDERERS

Release Outcome	Furman (n=37)	Life Sentence Cohort (n=128)
Total Released	21	88
Mean Time in Community	4.3 yrs.	2.9 yrs.
*Recidivated	4 (19%)	14 (16%)
Technical Violation	2	10
New Offense	2	4
Burglary	1	3
Rape	0	0
Murder	1	0
Robbery	0	1

* Recidivism is based on return to prison.

TABLE 5. RECIDIVISM RATES of THE TEXAS FURMAN-COMMUTED MURDERERS COMPARED WITH PREVIOUS RESEARCH

Study	Outcome Definitions	Failure Rate
Texas Furman	Reincarcerated:	19.0%
	New offense	9.5
	Violation	9.5
Texas 1973 Cohort	Reincarcerated:	15.9
	New Offense	4.5
	Violation	11.4
Vito and Wilson (1986)	Reincarcerated	29.0
	New offense	18.0
	Violation	11.0
Wallerstedt (1984)	Reincarcerated for new offense or violation	29.0
Donnelly and Bala (1984)	Reincarcerated for new offense or violation	27.3
Bedau (1982)	Reincarcerated:	6.3
	New Offense	1.2
	Violation	5.1

*The Bedau study was based on a one year follow-up of nationwide sample of male convicted murderers released during 1971-74 (see Table 4-5-3). The "at risk" period was the first year after release. The Donnelly and Bala (1984) study consisted of a five-year follow-up of 66 murderers released from New York State prisons in 1977. The Wallerstedt (1984) study reports the median reincarceration rate for homicide repeaters in Michigan (1978), Nebraska (1980), New York (1976), Oregon (1978), and Rhode Island (1978). Vito and Wilson's (1986) study is based on 17 Furman-Commuted Kentucky inmates who have been paroled. Donnelly and Bala, and Wallerstedt were reported in Vito and Wilson, 1986. Our Texas data represents a fourteen year followup.

DEFENSE EXHIBIT E

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Section 5
Monday, Nov. 10, 1986

LIFESTYLE
Ideas & Trends

DEFENDANT'S EXHIBIT
PENGAD-Bayonne, N. J.

DECIDING WHO IS DANGEROUS

Mental health professionals cannot predict violence — there are no tests, just guidelines

John Yunek / Chronicle

By VIVIENNE HEINES
Houston Chronicle

THE MAN was in his mid-20s, wearing an Army fatigue jacket and sporting a freshly cut Mohawk hairdo. He said he had guns in his house and he was going to shoot his neighbor.

"If you talked to him, he was rational about the whole thing — which scares me a lot — and he told me that he was going to do it," said Barbara Levinson, director of nursing at Belle Park Hospital, a private psychiatric facility in southwest Houston.

In the case above, it was not hard for Levinson to decide that her patient was potentially dangerous. Other cases, though, are not as clear-cut. They present mental health and medical professionals with a dilemma that is as complicated as it is challenging — how to predict if a patient is dangerous to himself or others.

"No one can predict dangerousness, and there is no absolute rule about how to predict if a person is dangerous. You can't even find two psychiatrists who will agree on a certain person," said Betsy Schwartz, executive director of the Mental Health Association of Houston and Harris County Inc.

"If we could predict dangerousness, we wouldn't have any crime."

Random, unprovoked violence is frightening and fickle. The good news is that it's rare; the bad news is that there is very little way of foretelling when and where it will occur.

The problem is compounded by several factors — lack of knowledge about violence, myths about who is potentially dangerous and fears people have about seeking help for emotional or mental disturbances. Often people are ashamed of seeking help for mental problems, either their own or for others.

"I think no matter how hard we've tried to say that mental illness or disorder is like going to the emergency room to get your finger fixed, there will always be a stigma," Levinson said.

Although homicide gets more publicity, suicide is the most common form of violent behavior, says Dr. Pedro Ruiz, chief of psychiatry at Ben Taub Hospital and vice chairman of the department of psychiatry at Baylor College of Medicine. Therefore, much of the research on violence focuses on suicide, and psychiatrists use similar markers in determining potential danger to others.

"A lot of it has to do with the planning, the means to carry out the plan, evidence of that kind of behavior in their past and good motivation to do it now," Cox said.

"You take those things and you can build a pretty scary individual but can you predict with certainty? It's like predicting suicide — most people don't do it — so if you say nobody does, you're going to be right 97 percent of the time."

Judgment is further hampered because patients who want to conceal violent tendencies can easily do so by lying to an evaluating psychiatrist. Frequently, hospitals don't see potentially dangerous patients until it's too late.

"Our biggest dilemma is when we feel like a patient would certainly benefit from treatment but won't commit himself to care," said Litrelle Levy, emergency room social worker at Ben Taub Hospital.

There are also legal problems. If a hospital holds a patient against his will without a valid medical reason, it can be accused of violating his civil rights. On the other hand, if it releases someone who is disturbed and dangerous, society is at risk.

"In order to be committed, to be treated against one's will, a person must be mentally ill and dangerous and there must be a causal connection between the two," said Dr. Betsy Comstock, medical director at the Bay Hospital Program at the Houston Veterans Administration Medical Center.

Mental illness and dangerousness do not go hand in hand; people are more often driven to homicidal or violent acts by external reasons, Comstock says.

"Some people are motivated to dangerous behavior by personal gain; some people murder other people for money. Revenge can be a motivation or an assault associated with a robbery," she said.

Indeed, mental health professionals agree that one of the most pervasive myths about violence is that it is committed by the mentally ill.

"We can't blame the majority of this on crazy people. Most crazy people don't do this," said clinical psychologist Michael Cox, director of training in psychology at Baylor College of Medicine.

"A lot of those people, it's hard to pick out unless you interview them. They just go their own way until they blow."

Once admitted to a hospital, a potentially violent or violent patient is first evaluated for medical causes and treatment. Among possible medical causes for violence are temporary epilepsy, brain tumors, hormonal difficulties or extreme anxiety caused by hypothyroidism, says Ruiz. If a patient is on drugs or drunk, he or she is stabilized in the intensive care unit.

Next, an evaluation is made by a team of psychiatric personnel. The patient's history is sought — maybe he's been in another facility or under care of an agency or doctor. This is especially important if the decision is made not to admit a patient because they may instead be sent to an agency or doctor.

"We cannot admit everybody that we see. We see 6,000 to 8,000 people a year. Generally speaking, we give first priority to patients we consider seriously suicidal or seriously dangerous to other people," Ruiz said.

On an emergency basis, the hospital has 24 hours to make a decision about treatment, says Dr. Robert Bacon, chief of psychiatry in the emergency room at Ben Taub Hospital. If they decide a patient needs a longer stay, they can file for an order of protective custody. If granted, the patient must see a judge in court within three days. In another 10 days, the patient must be seen by a judge again. Throughout the entire process, discharge plans including family members, social services, financial assistance, medical care and follow-up treatment are in progress.

Levy says doctors prefer to release patients in the care of a friend, relative or neighbor. Another option is alternative-care facilities that provide less attention than a hospital but more than independent living. There is a great need in the Houston area for such facilities, Levy says.

"We start working with the discharge plans as soon as a patient sets foot in here, with what will happen to a patient when he leaves the hospital," Ruiz said. "So that when we discharge the patient, we feel comfortable that he will not go back to the same system he came from."

Although violence may be more visible today, most psychiatrists say that doesn't mean there's more of it.

"It's always been with us: there's always been civil violence," Cox said. "People have always run amok in the past. In some ways the world is more safe than in the past; in other ways, there is a greater risk of danger."

"I don't think I necessarily see more violent patients but the fact that certain kinds of drugs are being used would mean there is more violence or different kinds of violence, more purposeless violence," Bacon said.

Still, economic problems may forecast an increase in violence.

"It has been proven that there is a relationship with unemployment and suicidal or violent behavior. Houston is facing a major economic crisis with oil and all that, particularly for the Hispanic and black populations. I would expect the rate of suicidal and violent behavior to go up," Ruiz said.

The deinstitutionalization of mental patients is also putting people who need attention on the streets, experts say.

"What we refer to as 'from back wards to back streets' is really true. We took them out of hospitals and put them on the streets," Schwartz said.

"We have fewer beds in the the state facilities . . . and we are beginning to see more and more mental patients join the criminal justice system," Ruiz said. "Those who are lucky come here and we are able to work with the court. Others go to jail. I think it's unfair because they don't belong in prisons, they belong in psychiatric programs."

Comstock believes most people ignore the fact that violent behavior related to mental illness will worsen if left untreated. She says that not spending the necessary money on mental illness can contribute to an increase in such violence.

Prevention, agrees Levinson, is the key in treating dangerousness.

"Awareness, education and the use of support systems in identifying problems is our best solution. Taking an active stance instead of a reactive stance is the answer," she said.

Doctors look for signs to define patient's problems

Trying to decide if a patient is violent is like traveling a twisting road with many in-

and is in the act of committing a crime, or because the drug has affected them and they

can signal danger.

"The family tends to think that the patient

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...ing and fickle. The good news is that it's rare; the bad news is that there is very little we ...way of foretelling when and where it will occur."

The problem is compounded by several factors — lack of knowledge about violence, myths about who is potentially dangerous and fears people have about seeking help for emotional or mental disturbances. Often people are ashamed of seeking help for mental problems, either their own or for others.

"I think no matter how hard we've tried to say that mental illness or disorder is like going to the emergency room to get your finger fixed, there will always be a stigma," Levinson said.

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...mental illness and violence do not go hand in hand; people are more often victims ...violent acts by others, ...said reasons. Comstock says.

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Next, an evaluation is made by a team of psychiatric personnel. The patient's history is sought — maybe he's been in another in-

...patient program in the past, or has been ...ordered to undergo outpatient treatment in the community, Ruiz said.

...they can ask for an evaluation in probate court. If granted, the patient must ...see a judge almost within three days. In another 10 days, the patient must be seen by a judge again. Throughout the entire process, discharge plans including family members, social services, financial assistance, medical care and follow-up treatment are in progress.

Levy says doctors prefer to release patients in the care of a friend, relative or neighbor. Another option is alternative-care facilities that provide less attention than a hospital but more than independent living. There is a great need in the Houston area for such facilities, Levy says.

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"We have fewer beds in the the state facilities . . . and we are beginning to see more and more mental patients join the criminal justice system," Ruiz said. "Those who are lucky come here and we are able to work with the court. Others go to jail. I think it's unfair because they don't belong in prisons, they belong in psychiatric programs."

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"Awareness, education and the use of support systems in identifying problems is our best solution. Taking an active stance instead of a reactive stance is the answer," she said.

Doctors look for signs to define patient's problems

Trying to decide if a patient is violent is like traveling a twisting road with many intersections and without a map. The road signs may be hidden or misleading and, sometimes, they can only be interpreted with the help of others.

Doctors say that when making an assessment of dangerousness, they look for certain markers that might indicate a potential for violence.

Does the patient have a history of violence? Has he or she expressed an intention to harm anyone? Does the patient have a clear-cut plan or access to weapons to carry out that violence? Are they under the influence of drugs or alcohol? Are they emotionally stable?

"A lot of our violent crimes are drug-related, either because the person is high and is in the act of committing a crime, or because the drug has affected them and they are in minimal control of their aggressive tendencies," said Barbara Levinson, director of nursing at Belle Park Hospital.

Even the season can contribute. Holidays are harbingers of violence as well.

"Sometimes patients plan to commit violent acts during holidays," said Dr. Pedro Ruiz, chief of psychiatry at Ben Taub Hospital and vice chairman of the department of psychiatry at Baylor College of Medicine.

Doctors also look for signals, like a surge of energy. When a patient rouses from lethargy enough to carry out a self-destructive act or when anti-depressant medicine begins to take effect, it might appear that a patient has improved whereas the reverse is true.

Similarly, if a patient is suddenly calm, it can signal danger.

"The family tends to think that the patient is better but sometimes it means that the patient has made a decision," Ruiz said.

Stress can contribute, says Levinson, who worked with New York's Tremont Crisis Center in the South Bronx for 10 years. She says she looks for a recent precipitating event that can drive a person over the edge.

"When you hear about mass murderers, those kinds of violent outbursts of homicidal acts could be done by a variety of people either who have long-standing anxieties or they move up to that," she said. "Anything can precipitate a crisis state . . . it could be anything from the death of a loved one to your electricity going off."

Experts often talk to a patient's support system when trying to determine dangerousness, Levinson says. Since friends, family, neighbors and co-workers might provide information not available from the patient, they need to be educated to watch for behavioral changes.

"If families see changes in a person's behavior over a period of time, do they know who to go to?" she asked. She recalls the case of a mother who stabbed her 3-year-old child. Later, it was discovered she had gone through some noticeable behavior changes before the incident, including hearing voices.

"Whenever you have someone that says I hear voices and the voices are telling me to do something, you have got to intervene. Because if they hear voices, they have given up control," Levinson said.

— VIVIENNE HEINES

Use your common sense to avoid harmful situations

There are certain steps you can take for protection if you find yourself in a situation with someone you think may be dangerous to himself or others.

First, don't panic. "Show that you're in control of the situation and act as calm and firm as possible," said Betsy Schwartz, executive director of the Mental Health Association of Houston and Harris County Inc.

Try not to show fear. You may want to remain seated if the person is standing up so as not to appear aggressive. A show of aggression could set off a confrontation.

"Behave in a confident manner. Be nonthreatening, calming," said Barbara Levinson, director of nursing at Belle Park Hospital.

If you suspect that someone may be dangerous, don't see them alone. If they come into your office or a room where you are, leave the door open.

It may not be useful to reason with someone who's out of control, Schwartz says.

"Someone who you think is acting violent is not rational at that moment, especially if he is under the influence of drugs or alcohol. To try and talk to him rationally is not very productive," she said.

Try to avoid potentially dangerous situations — working alone at night, walking by yourself on deserted streets after dark. But don't let yourself become incapacitated by fears over violence, Schwartz adds.

"When you live in a big metropolitan city like New York or Houston, where there are a lot of crimes, common sense tells you that you are at higher risk," she said.

"But you have to keep that in perspective. You can't live your life overreacting and being afraid but you can use your common sense and avoid certain situations."

— VIVIENNE HEINES

DEFENSE EXHIBIT F

CRIME AND DELINQUENCY

October 1972

DEFENDANT'S EXHIBIT
PENCAD-Reporting-W. J.

(6)

Can Violence Be Predicted?*

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The prediction of violence in offender populations has long been a dream of correctional decision-makers. The possibility of identifying those individuals who will engage in violent behavior in the future offers the prospect of treatment interventions to reduce such violence. Using elaborate case histories, current measures of mental and emotional functioning, and professional prognoses for a sample of 4,146 California Youth Authority wards, the present study sought to develop a classification device for estimating assaultive potential with sufficient accuracy to be useful in correctional program decisions. Simple classification procedures and multivariate approaches failed to yield an operationally practical prediction instrument that would warrant implementation in actual preventive or correctional practice. Much of the violent behavior we would wish to predict will probably never come to our attention and the part that does will be far from a representative sample. The prediction equations themselves contain the seed of self-fulfilling prophecy.

*This study was supported by ACORN grant NI-095 from the National Institute of Law Enforcement and Criminal Justice, LEAA, to the NCCD Research Center. Part of this work was supported by General Research Support Grant 1 SOL RR-05693-01 from the National Institute of Health to the NCCD Research Center. A more detailed presentation of the study will be issued through LEAA as a monograph entitled "Assaultive Youth: An Exploratory Study of the Assaultive Experience and Assaultive Potential."

A LARGE PROPORTION OF THE PUBLIC is alarmed about criminal violence. This alarm is commonly expressed as fear for one's own physical safety. Many are particularly apprehensive about danger in the streets and see the stranger as a menace.[1] They usually stay out of "dangerous areas" and sometimes purchase weapons with which to defend their homes and families. What many do not realize is that both of these responses are likely to elevate the overall level of public danger: as public traffic in an area diminishes, opportunities for victimizing those who remain may increase; and the chance of accidental injury, posed by the presence of a weapon in the home, may surpass the likelihood of deliberate injury by an intruder.

But citizens do not seem as concerned about the *probability* of personal injury as they are about the *possibility* of injury from a specific source: the stranger. General statistics showing the low probability of becoming a victim of homicide or physical assault do not appear to alleviate their concern, and comparative statistics showing that violence is most likely to be unleashed by a relative or personal acquaintance of the victim appear unlikely to alter their defense tactics. While some of the threat is perceived as coming from minority group members—political (e.g., "militant") and cultural (e.g., "hippie") as well as ethnic minorities—a great deal of suspicion is aimed toward those already adjudicated as criminal. Consequently, in recent years correctional agencies have been exposed to increasing pressure to "do something" about violent offenders.

In order to "do something" through treatment and intervention measures, it is first necessary to know to whom these measures are to be applied. Assuming that an effective and appropriate measure were available (a most unwarranted assumption[2]), the first move would be to identify a population of violent individuals—that is, individuals who will engage in violent behavior in the future.

Prediction: The Violent Offender

There is little doubt that the known offender in general and the known violent offender in particular are more likely than members of the public at large to commit an assaultive act. Still, there has been no successful attempt to identify, within either of the offender groups, a subclass whose members have a greater-than-even chance of engaging again in an assaultive act. The best prediction available today, for even the most refined set of offenders, is that any particular member of that set *will not* become violent. Even so, since crimes of personal violence have such grave consequences for their victims, justification is often made for identifying—and extending special attention or treatment to—all members of a class with higher-than-average violence potential (for example, a class 10 per cent of whose members are likely to engage in serious violent acts during the period of official commitment or opportunity for intervention). Let us illustrate with two existing examples:

1. "Public Attitudes toward Crime and Law Enforcement," in President's Commission on Law Enforcement and Administration of Justice, *Task Force Report: Crime and Its Impact—An Assessment* (Washington, D.C.: U.S. Government Printing Office, 1967), ch. 6.

2. James O. Robison and Gerald Smith, "The Effectiveness of Correctional Programs," *Crime and Delinquency*, January 1971, pp. 67-80.

In 1965 the California Department of Corrections' Research Division developed a violence prediction scale for its population which employed, as predictor items, commitment offense, number of prior commitments, opiate use, age, length of imprisonment, and institution of release.[3] The result was the identification of a class of offenders (the most violent class isolated), 14 per cent of whom could be expected to violate parole by a violent or potentially violent discovered act. This likelihood was nearly three times as great as that for parolees in general, whose violence probability, by the same criterion, was only 5 per cent.

If a perfect corrective intervention method were developed and applied to the members of the violence-prone class, all acts of violence by this class could be prevented. However, since the violence potential for the class is already low (14 per cent), 86 per cent of its members could be expected to refrain from violence without the special treatment, although the entire group must be exposed to it at a considerable treatment cost. Further, since this class is such a small part of the parolee population (less than 3 per cent in this example), only 8 per cent of total violence on parole would be prevented by its isolation and special treatment—leaving 92 per cent of violent parolee acts occurring as usual. If the treatment were less than entirely successful the violence reduction would be even less.

Our second example deals with the application of violence history classification to screening decisions by the California Department of Corrections' Parole and Community Services Division. All parolees released to supervision are classified into one of six categories according to past aggressive behavior. The categories range from the most serious, Aggressive Category No. 1, whose members have committed one or more acts of major violence (murder, assault with a deadly weapon, etc.), to the lowest level, Aggressive Category No. 6, consisting of parolees with no recorded history of aggression. The classification procedure involved both actual offender histories and psychiatric reports assessing violence potential.

The usefulness of this classification procedure can be examined by analyzing the effectiveness of decisions based on it in a correctional setting. Since the inception in 1965 of the parole division's Work Unit Program (a reduced-caseload, intensive-supervision operation), parolees in the two most aggressive categories were placed in Work Unit supervision instead of large-caseload or "conventional" supervision. For some period after their release from prison to parole, the men were required to receive "special" supervision—the highest of three intensity levels (or contact frequencies) in Work Unit parole. A modification was made late in 1967 which permitted the assignment of some of these cases to the conventional program. It then became possible to compare the two methods (see Table 1) and to assess the efficiency of the costly Work Unit intervention with violent offenders.

The findings presented in Table 1 indicate that the special precautions taken for identifying and handling the violent offender are unwarranted, given the actual level of danger. They can be justified only as token steps to alleviate fears about the possible oc-

3. "Predicting Violence Proneness on Parole." Crime Studies Section, California Department of Corrections Research Division, November 1965 (unpublished paper).

TABLE 1
ONE-YEAR FOLLOW-UP OF RETURNS TO PRISON FOR VIOLENT OFFENSES COMMITTED BY PAROLEES RELEASED BETWEEN JANUARY 1968 AND JUNE 1969

Outcome	Type of Parole Supervision			
	Work Unit		Conventional	
Convicted and returned to prison for:	Aggressive (AC 1-2)	Less aggressive (AC 3-6)	Aggressive (AC 1-2)	Less aggressive (AC 3-6)
New crime involving actual violence*	0.3%	0.4%	0.4%	0.2%
New crime involving possible violence**	0.8%	0.4%	1.8%	1.6%
Number released	1,174	2,682	456	3,400

*Actual violence includes murder, manslaughter, assaults, rape, and kidnapping.
**Possible violence includes robbery, lewd and lascivious conduct, and escape.

currence of violence. One in every five parolees (1,630 out of 7,712) was assigned to the Potentially Aggressive categories (AC 1-2), and yet the rate of crimes involving actual violence for this group was 3.1 per thousand cases (5/1,630), compared to 2.8 per thousand (17/6,082) among the Less Aggressive categories.

Our familiarity with the findings on past efforts at violence prediction left us little enthusiasm for developing a device that could have practical utility for correctional decision-makers. Nevertheless, many things convinced us of the importance of a contemporary study that could link its findings to their immediate social—and even political—implications. Public concern about the issue, the evident interest of officials and administrators in problems of offender classification (e.g., preventive detention), and the apparent belief of many that such practices are helpful or necessary and that instruments for effective prediction can eventually be perfected were all indications of the need for the study. A further incentive was the availability of a data pool[4] particularly suited to such an exercise by size of sample, character of population, and comprehensiveness of stored case information.

The Present Study—Youth and Violence

In California, the most serious juvenile offenders are committed to the Department of the Youth Authority. The majority of this department's wards are maintained in the community under parole supervision (about 15,000 wards are on parole during any given year) and are therefore exposed to opportunities for violent crime. Youth Authority wards have both a proportionately higher recidivism rate and more violence recidivism than the Department of Corrections' adult parolees. The contribution of Youth Authority wards to total new crimes of violence in California is relatively small; however, with only a slightly larger population than adult parolees, Youth Authority wards account for twice as many new violent crimes on which Superior Court convictions are obtained in the state. Felony defendants who already had criminal status and were convicted and sentenced in Superior Court for willful homicide in 1967 num-

4. The authors are grateful to the Division of Research, California Youth Authority, for assistance in assembling the data base.

bered sixteen Department of Corrections parolees and thirty-three Youth Authority parolees; for robbery, 143 CDC parolees and 234 CYA parolees. Thus, while the vast majority of Youth Authority wards will not be convicted for a new crime of actual or threatened personal violence, the likelihood of such acts is still sufficiently high to make this population a prime target for the development and application of assault-proneness scales.

The study sample consisted of 4,146 California Youth Authority wards admitted to the Reception Guidance Center at Deuel Vocational Institution during 1964-65. The focus of the study was actual violence—primarily assault. Attention was given to the record of violence in each subject's career, including the offense for which he was incarcerated, past violent behavior not necessarily connected with the immediate offense, and violence during a fifteen-month exposure period on parole following his release from the institution. Extensive background information available on each subject included the following: (1) elaborate case histories containing possible predictor items of violence proneness, such as past behavior (alcohol, drugs, suicide attempts, homosexuality, escape, weapons-carrying) and past or present diagnosed clinical conditions (psychosis, neurosis, brain damage, personality trait disturbance, personality pattern disturbance); (2) current measures of mental and emotional functioning (intelligence, maturity level, grade achievement, MMPI, CPI); and (3) prognostic judgments (counselors' ratings of academic and vocational potential, plus their recommendations for type of training).

Using this information we hoped to determine whether it was possible to construct a device for assessing potential assaultiveness with sufficient accuracy for program decisions.

In the sample of 4,146 wards, 250 or 6 per cent had a violent commitment offense and 104 or 2.5 per cent were involved in a violent violation during the fifteen-month period after their release. Our task was to identify as many of the 104 violators as possible while misclassifying as "violent" a minimum of the remaining cases. We began by developing subgroup classifications of offenders. To control for sampling variability and to insure that findings would have some utility for correctional decisions, subgroups were disregarded unless they contained at least one hundred subjects (about 2.5 per cent of the population) or unless they could reasonably be merged with an adjacent category to exceed one hundred in total. A search was then conducted to determine which groups had a favorable outcome rate notably different from the entire study sample rate of 61.1 per cent. The thresholds applied were "at or below 50 per cent favorable

TABLE 2
SIZABLE AND DEVIATING OUTCOME SUBGROUPS*

Subgroup	No. of Cases	Favorable Outcome
Violent commitment offense	250	70.4%
Fourth or higher admission to CYA	351	46.5%
Moderate to serious opiate involvement	132	42.4%

*Subgroups numbering greater than one hundred, with favorable outcome 50 per cent or less, 70 per cent or more.

outcome" and "at or above 70 per cent favorable outcome." Only three sizable subgroups out of sixty (see Table 2) fell outside these boundaries.

Thus, the recidivism rate for offenders who have already been admitted to CYA institutions on several occasions and for those with more than a mild history of opiate usage was substantially higher than for the offender population in general. Neither of these groups contained a higher-than-average proportion of members with violent commitment offenses—4.8 per cent for the multiple admission group and 3.8 per cent for the opiate group, compared to 6.0 per cent overall. Violent recidivism was low for these groups—4.8 per cent and 2.3 per cent, respectively; however, rate of violent recidivism for the multiple offender group was still twice as high as that for the overall population (2.4 per cent).

We found that while recidivism among cases with a violent admission offense was lower than average, this recidivism was more likely to be violent when it occurred, and it accounted for 17.4 per cent of the violations for this group, compared to 7.4 per cent overall. The rate of violent recidivism, however, was 4.8 per cent—the same as the rate for the multiple recidivist group. Further, since the total sample of offenders with violent commitment offenses numbered only 250, this group contributed a relatively small share to the total violence on parole (twelve incidents out of 104). Thus, the odds were about eight to one against a violent recidivist having had a violent admission offense and about nineteen to one against a parolee with a violent admission offense breaking parole by committing another violent offense.

VIOLENT RECIDIVISM

A second search was conducted within the sixty subgroups to determine which groups displayed a high proportion of violent offenses in their recidivism. For the full population, 7.4 per cent of recidivism was violent, and all sizable subgroups in which the corresponding figure exceeded 10 per cent were selected (see Table 3). Again, the convention of groups exceeding one hundred was applied.

TABLE 3
SIZABLE SUBGROUPS FOR WHICH VIOLENCE EXCEEDED 10 PER CENT OF SUBGROUP RECIDIVISM

Subgroup	Favorable Outcome	Violent Recidivism		Violent Commitment Offense	Total in Group
		% of Cases in Group	% of Total Violations		
Psychiatric referral for evaluation of violence potential	62.3%	6.2%	17.6%	31.1%	257
History of actual violence	61.2%	5.2%	14.9%	20.3%	1,006
Fourth or higher admission to CYA	46.5%	4.8%	10.2%	4.8%	351
Violent commitment offense	70.4%	4.8%	17.4%	100.0%	250
Mexican-American	61.1%	4.3%	12.1%	9.5%	772
Severe alcohol problem	58.5%	4.0%	11.2%	11.7%	624
Entire sample	61.1%	2.4%	7.4%	6.0%	4,146

TABLE 4
VIOLENCE HISTORY AND TYPE OF RECIDIVISM

	Simple Recidivism	Violent Recidivism	Violent Recidivists	Total Cases
No history of violence	40.2%	1.8%	42	2,386
Aggressive crime, but no actual violence	34.7%	1.3%	10	754
History of actual violence	38.8%	5.2%	52	1,006
Total	38.9%	2.4%	104	4,146

The multiple-recidivist and violent commitment subgroups have been discussed earlier. The four remaining groups all have general recidivism rates quite close to the average but, for each, a greater than usual proportion of recidivism is through violence. More than 10 per cent of the recidivism of Chicano offenders and offenders diagnosed as having a severe alcohol problem is violent, but for each of these groups the rate of violence on parole remains below 5 per cent.

The class of offenders with the highest level of violent recidivism is composed of subjects who had been referred to psychiatrists for evaluation of their violence potential upon or during their CYA incarceration. This group does not have a higher-than-usual rate of general recidivism, but nearly one in five (17.6 per cent) of the violations that do occur are violent. Nevertheless, the *rate* of violent recidivism remains relatively low (6.2 per cent) and the group contains only 257 subjects—just over 5 per cent of the study population.

The "History of actual violence" category is of particular interest for several reasons. First, it is at least as capable of discriminating violence on parole as "Violent admission offense" and is applicable to a relatively high proportion of the total admission population.[5] Second, relatively few (20.3 per cent) of the subjects in this category were admitted on an offense of labeled violence. Since this classification is based on actual behavior rather than on legal definitions, it should not be surprising that discrimination is improved with regard to future violence. But is a history of actual violence a useful indicator of potential violence on parole? Examine Table 4.

Since the first two categories have similar and low levels of violent recidivism, it appears reasonable to combine them into a single category containing 3,140 cases with fifty-two violent recidivists—a rate of 1.6 per cent. The category of offenders with a history of actual violence contains one-fourth of the total population and half the subjects who later became violent. This one category has a violent recidivism rate three times greater than that of the remainder. However, if the interest is in using this information for programing decisions to reduce the danger of violence, the practical consequences of this information are trivial. If a decision-maker were to consider all of the cases in the "History of actual violence" category as potentially violent and submit

5. Because the temporal dimension is sacrificed in this classification, it is not possible to tell whether recency or distance in history is a relevant variable. However, considering the age of our subjects (mean age for total study population is 19.45 years, with a range of 16 to 25 years), this factor does not appear to be critical.

them to special programing, he would be sounding a false alarm nineteen times in twenty and wasting 95 per cent of the resources expended in that endeavor. Further, there is no other form of simple classification available thus far that would enable him to improve on this level of efficiency.

The decision-maker might, nevertheless, apply the information in another fashion and determine that he will expend no energy on violence-preventive measures with regard to members of the two categories with no violent history, in which case he could ignore three-quarters of the population and miss only sixteen cases per thousand. He will notice, however, that this informed decision is hardly more effective than an uninformed decision, owing to the general rarity of violence on parole. He could deal with the entire population in this way and miss 50 per cent more but still make only twenty-four errors per thousand cases. The quest for an operationally practical predictor of violence from simple classification appears to be futile.

Multivariate Approaches to Violence Prediction

Several procedures were employed on the present study sample in the attempt to develop regression equations for application to violence prediction. William Meredith, Department of Psychology, University of California at Berkeley and Peter Griffin, Department of Mathematics, Sacramento State College, conducted the statistical analyses.[6] The results of these analyses were similar to our previous efforts, although their interpretations were quite different. Griffin concluded:

> Considering the rarity of the phenomenon [only one in forty exhibited subsequent violence], it is difficult to imagine that, even with the most refined techniques, one could do much better than, say, to double the best rates obtained here. The utility of such an optimal rate would seem highly limited for selection for remedial programs, etc. Of a group of 2,073 with fifty-two expected to be "violent," if those with the fifty-two highest violence potentials, according to our predictive instrument, were separated for special treatment, we could expect to have correctly identified only eight of them while wasting treatment on forty-four false positives. In addition, more than 80 per cent of the actually violent would escape the sieve. This weakness is inherent in the limitations of the quantifiable variables we have available.

Using analytic procedures that were basically similar to those used by Griffin although varying in many details, Meredith arrived at markedly different conclusions:

> It is apparent that this set of data offers numerous encouraging leads on the make-up and identification of potentially violent parolees. These results strongly suggest that a useful violence index could be constructed—although a great deal more research is obviously necessary.

He suggested that more accurate results might be yielded if different predictive equations were developed for each ethnic group and if multiple analyses of variance were applied, using the following four classes: violent history—violent parole offense; violent history—no violent parole offense; nonviolent history—violent parole offense; and nonviolent history—no violent parole offense. By such means, Meredith said, "it appears to be feasi-

6. The statistical data and technical descriptions of the multivariate approaches have been omitted from the text of this article. This information is available in the LEAA monograph, "Assaultive Youth."

ble to develop, in this sample at least, an index of violence-proneness that would correctly identify over 50 per cent of those individuals violating parole by violent offenses at the cost of misclassifying no more than 10 per cent of those not returned for violent offense."

But let us examine, for a moment, what the situation would be if this promise could be fulfilled:

50% of 104 violent offenders=52

10% of 4,042 nonviolent offenders=404

The ratio of false positives to true positives, although lower than any actually attained, remains a discouraging eight to one, and meanwhile, half of the true positives would continue to be ignored.

Griffin's rejection and Meredith's endorsement contain no reference to program applications other than "useful" (Meredith) and "special treatment" (Griffin). The policy question, if we may oversimplify it, is this: What represents an acceptable trade-off between the values of public safety and individual liberty? Answers to this question presuppose the existence of a concrete proposal that can be examined to determine whether and to what extent, if the plan is accepted, the realization of one value will entail the sacrifice of the other.

Discussion

The present state of the art holds little promise for the development of a prediction instrument that would warrant implementation in actual preventive or correctional programs. The problem is fundamentally related to the nature of the phenomenon we studied: *reported violence*. A detailed examination of the 104 incidents of violence indicated that violence typically erupts out of a crisis. In these circumstances the labeled assailant may have been blamed for not avoiding the situation altogether, for contributing to the provocation within it, or for either losing control or asserting the control that became the violent act. Some of these incidents resulted in no injury or minimal injury to the labeled victim, and are recorded only because something transpired to bring official notice to the event, requiring its classification and acknowledgement.

Behavioral events of this type are not rare; they are probably quite common. Instead, it is the *certification* of the events that is rare, and this perhaps provides us with a major clue to the problems of prediction, as well as an alternate explanation of why we are capable at all of predicting better than "chance." The reason may lie in what the police choose to do about the event and how they choose to characterize it when it is brought to their attention. If the event is not clearly classifiable as violent, some part of their determination (as well as that of other relevant parties) is likely to be based on the prior record and reputation of the offender. Such processes will affect decisions about whether the subject is released, whether charges brought are subsequently dismissed, whether the violation will be noted and processed by the Youth Authority, whether parole revocation will result, and consequently whether the event will become available as a datum for research on violence prediction.

The problem, then, is this: Most of the violent behavior we would wish to predict probably never comes to our attention, and the part that does is far from a representative sample. The prediction equations contain the seed of self-fulfilling prophecy: those who have been noticed before will be no-

ticed again. If this is so, the question of why "prediction" hasn't succeeded remains unanswered. It is relevant to raise questions about the *reliability* as well as the validity of the criteria, since the decisions involved vary by characteristics of persons other than the offender. The same kinds of influences also reduce the reliability of many of the predictor variables we employed, compounding the general problem.

As we approach incidents of greater gravity, such as those resulting in major injury or death, the reliability of the criteria changes. There is likely to be less variance in the handling of such events, and we can be more confident that they will be reliably brought to our attention.[7] These are the events to which everyone feels obligated to respond, and it is these events that we are most concerned with being able to predict and prevent. Twenty-six of our 104 cases involved in violence on parole inflicted major injury or death.

However, these twenty-six "violents" represent *only six-tenths of one per cent of the 4,146-member study sample.* The classification of events on the basis of the magnitude of their consequences may not be a true indicator of an individual's violence-proneness. The severity of injury resulting from a given interaction is only partly determined by the assailant's intent or factors within his control, and innumerable factors may make the difference between no injury and death, or between minor and major injury.

A still deeper question must also be asked: Once the potentially violent cases have been identified successfully, what then? Currently, violence prevention and treatment of known violent persons remain rather primitive, consisting largely of more secure confinement and the administration of calming drugs or counseling. Do such means accomplish anything besides a temporary reduction in the offender's social nuisance level? The adjustment centers within the California adult prisons were instituted, among other reasons, to control and reduce violence among prisoners, but today it is not certain whether they alleviate or exacerbate the problem. What are the available cures for "violence-proneness"?

Finally, we need to examine the important ethical problems that are a direct result of the present level of knowledge in identification of violence-prone individuals. Concern about violence will inevitably lead to the development of special treatment programs, but the majority of persons placed in such programs must be false positives—persons who would not commit the act which the program is designed to prevent. It must be acknowledged that involvement in a corrective program is a constraint on an individual as well as a possible help and that unnecessary constraints on human freedom should be avoided. Those who argue that treatment cannot harm the person who does not need it and those who would warp the definition of "need" are obviously ignorant of the effects of social stigma and of the difficulty of administering corrective interventions without social stigma as a result.

Confidence in the ability to predict violence serves to legitimate intrusive types of social control. Our demonstration of the *futility* of such prediction should have consequences as great for the protection of individual liberty as a demonstration of the *utility* of violence prediction would have for the protection of society.

7. The same probably holds true for one type of event that is ordinarily less violent—resisting arrest or battery on a police officer.

DEFENSE EXHIBIT G.

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JOURNAL OF EXPERIMENTAL RESEARCH IN PERSONALITY 1, 17–26 (1965)

DEFENDANT'S EXHIBIT 67
PENCAD-Bayonne, N. J.

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GARDNER[illegible]
University of Texas

Thematic Apperception Test (TAT) protocols from homosexual and normal college *Ss* and homosexual and normal prisoners were employed in two consecutive studies concerned with clinical and actuarial prediction. In the first study a clinician blindly predicted the criterion from TAT protocols with 95% accuracy. Twenty objective TAT indices, when combined after-the-fact using actuarial methods, functioned nearly as well as the clinician. When applied to the prison population, the actuarial methods were totally ineffective, while two clinicians were more successful in predicting the criterion. The findings are discussed in terms of their implications for the clinical-actuarial prediction controversy as well as the probable utility of objective "signs" derived from projective technique protocols.

The task of the investigator is inextricably linked to the individual observer, and nowhere is this more frustratingly evident than in the study of personality. Although the efforts of psychologists to dehumanize–more positively, to "objectify" –the process of data collection have been many and ingenious, it remains true that behind every validity coefficient or network of justifying concepts and operations there lurks, at some point, an observer, hopefully a sensitive and unbiased observer. Few psychologists have accepted this fact more gracefully than Henry A. Murray and none has labored more diligently and imaginatively to maximize the contribution of the observer and to provide him with a respected position within the field of psychology.

[1]This research was supported by a grant from the Ford Foundation and research grant M-1949 from the National Institute of Mental Health. The paper was written while the author was in residence at the Center for Advanced Study in the Behavioral Sciences. Final preparation of the manuscript was facilitated by sage comments from Lee J. Cronbach, Anthony Davids, Edward E. Jones, and David T. Lykken. I received valuable assistance in the collection and analysis of data from Jean Bradford, James Kincannon, and Harvey D. Winston. The late Ephraim Rosen generously served as one of the judges in the second study.

The present investigations may be viewed as minor attempts to assess the relative merits of the trained human observer in a particular setting. More specifically, they compare the judgment of one or more unaided clinicians with objective and actuarial methods of prediction under conditions where the special strengths of the clinician are given a reasonable opportunity to manifest themselves. As such they belong to a growing body of investigations concerned with the relative merits of mechanical, objective, and (typically) quantitative methods of prediction as opposed to the relatively subjective and qualitative predictions of the clinician. Such studies have been summarized ably by Meehl (1954), Cronbach (1956), and Gough (1962) among others, and the area of investigation owes much to the earlier writing of Allport (1937, 1942), Sarbin (1941, 1942), and Murray (1938, 1948).

It is worth noting that this issue possesses certain significant links to the idiographic-nomothetic question, and like the latter controversy it has proved sturdily resistant to the frequent suggestion (for example, Holt, 1958; Zubin, 1956) that sophisticated examination of the problem reveals little or no real basis for maintaining such a distinction or issue. Just as species survival may be considered the ultimate test of "fitness," so too the persistence

of a conceptual distinction or empirical issue over many years in the face of repeated efforts to obliterate or dissolve it may be considered evidence of theoretical-empirical fitness or significance.

Study I

In this study, which already has been reported in part (Lindzey, Tejessy, and Zamansky, 1958), it was possible to compare the predictive (literally, postdictive) effectiveness of a number of objective TAT indices of homosexuality (individually and in combination) with the comparable effectiveness of clinical predictions by an experienced interpreter of the TAT.

Method

Subjects. The *Ss* consisted of 20 undergraduate male students who had acknowledged overt homosexual acts and a group of 20 undergraduates comparable in sex, age, and educational level but with no known history of homosexuality. They were volunteers and received no pay for their participation.

Procedure. Five TAT cards (4, 6BM, 7BM, 10, 18BM) were administered individually by an experienced male administrator. The resultant protocols with all identification of individual *Ss* removed were then scored for 20 different variables or indices that were believed on the basis of prior research or formulation to be indicative of homosexual tendencies (Lindzey, Bradford, Tejessy, and Davids, 1959). The variables, scoring procedures, and reliabilities are described in greater detail in an earlier publication (Lindzey *et al.*, 1958), and they are briefly identified in Table 1.

The TAT protocols were also sorted blindly by an experienced interpreter of the TAT who was generally familiar with all the objective indices used in the study but was permitted to make his classification without justification or specification of the basis for his decision. He also divided the predictions into those of which he was confident and those of which he was uncertain.

Results

The results summarized in Table 1 indicate clearly that the objective indices functioned very well in comparison with similar indices derived from TAT protocols that have been examined in previous studies (Lindzey and Newburg, 1954; Lindzey and Tejessy, 1956). However, it is equally clear that none of the indices serves by itself as a powerful basis for discrimination between the homosexual and normal groups. Indeed, when compared with the judgments of an experienced clinician they fare very poorly. The judge was able to sort the protocols with 95% accuracy–classifying incorrectly one *S* from each group. Moreover, of the 29 judgments which he considered "confident," there were no incorrect classifications.

The question remains whether it is possible to combine after the fact the information contained in the 20 objective indices and produce findings that parallel, or closely resemble, those produced by qualitative, clinical judgments. The first step in answering this question was simply to arrange all indices (no matter what the prediction or expectation had been) so that a high score was typical of the homosexual group and a low score of the normal group. This involved reversing two variables (15 and 19). We then cumulated raw scores across all variables for each *S*, ignoring the different ranges of scores permitted by the various scoring procedures. The resultant distribution of scores for the two groups are reported in Fig. 1. Next we divided the scores for each variable as close to the median as possible so that we had a high and low group. Then for each *S* we simply counted the number of variables in which his score placed him in the high group, and the results for the two groups are summarized in Fig. 2. Both of these procedures functioned effectively; indeed, if we permit ourselves the luxury of maximizing diagnostic accuracy by identifying a cutting point after-the-fact, we are able to identify such a score for each distribution that will correctly classify 34 of the 40 *Ss*.

A third objective approach used in the attempt to extract the diagnostic information potentially available in these indices emphasized pattern or configural analysis. We employed an ingenious technique devised by Lykken (1956; Lykken and Rose, (1963) that utilizes dichotomous predictor variables to make up actuarial tables for the various patterns of scores. Each table represents the observed frequency from

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4 Attitude toward marr
5 Man-killing woman
6 Sexual references
7 Unstable identification
8 Feminine feelings, emo
9 Shallow heterosexual r
10 Male embrace
11 Attitude toward oppos
12 Tragic heterosexual re
13 Attachment to mother
14 18BM: Symbolism or
15 Attachment to father
16 Derogatory sexual ter
17 Homosexual content
18 Incest
19 10BM: No elderly cou
20 18BM: Positive introd

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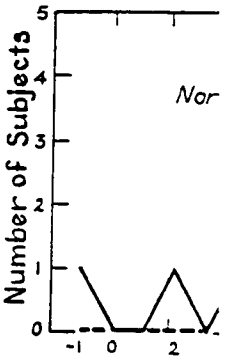

Fig. 1. Comparis

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Table 1
Dimensional TAT Comparison of College Students

Variable	Normal (N = 20) M	Normal (N = 20) Freq.	Homosexual (N = 20) M	Homosexual (N = 20) Freq.	p*
1 Misrecognition of sex		3		3	—
2 18BM: Attack from the rear		4		9	<.10
3 Feminine identification	1.05		1.55		<.005
4 Attitude toward marriage	−.32		.48		<.005
5 Man killing woman		0		5	<.02
6 Sexual references	.55		1.25		NS
7 Unstable identification	1.65		2.25		<.005
8 Feminine feelings, emotions	2.10		2.05		NS
9 Shallow heterosexual relations	.90		1.75		<.005
10 Male embrace		0		1	—
11 Attitude toward opposite sex	−.32		.18		NS
12 Tragic heterosexual relations		2		7	.06
13 Attachment to mother		2		4	NS
14 18BM: Symbolism or allegory		0		6	.01
15 Attachment to father		5		1	.18
16 Derogatory sexual terms applied to women		0		7	.004
17 Homosexual content		0		6	.01
18 Incest		0		1	—
19 10BM: No elderly couple		16		11	NS
20 18BM: Positive introduction of female		5		0	.02

* Values of p for differences between means are based on t tests. Those for variables 2 and 19 are based on χ^2, and the remainder, on Fisher's Exact Test. Only the variables on which the difference was not in the predicted direction (8, 15, 19) were assigned to a two-tailed test of significance.

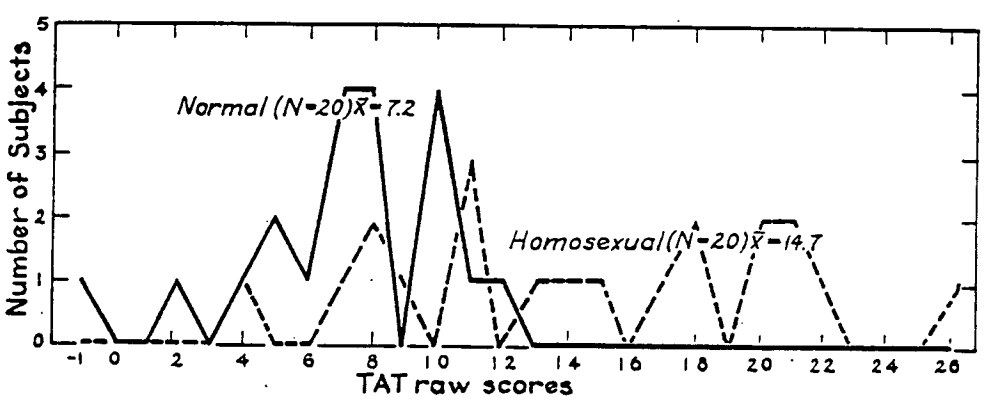

Fig. 1. Comparison of normal and homosexual college students on total TAT scores.

each criterion group for one particular pattern; for example, for the pattern low,high,high for variables 14, 16, and 17 there were 5 homosexual *Ss* and 0 normal *Ss*, thus leading to the prediction of homosexuality from this pattern, while for the pattern low,low,low for variables 14, 16, and 17 there were 7 homosexual *Ss* and 20 normal *Ss*, leading to the prediction of normality. It is also possible to provide a "validity coefficient" for each pattern which is based upon the number of cases in the

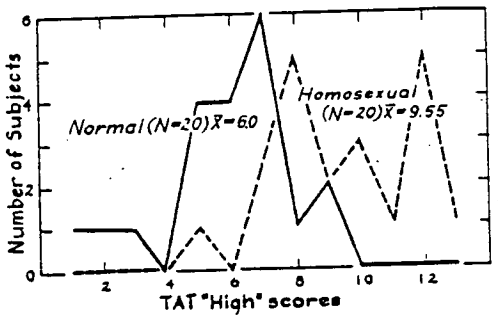

FIG. 2. Comparison of normal and homosexual college subjects on total TAT "high" scores.

original group displaying the pattern and the amount of difference between criterion groups in frequency for this pattern.

In the present study we used five actuarial tables, consisting of three variables each, which included most of the individual indices that seemed to function effectively. The variable groups employed were 14-16-17, 12-19-20, 2-12-16, 6-2-11, and 3-4-15. With this method it proved possible to predict correctly (after the fact) 34 out of the 40 cases when the prediction for each case was that indicated by three or more of the five tables. This performance could be increased slightly (36 correct identifications) if the prediction was based upon the difference for each *S* between the summed validity coefficients for the homosexual predictions as opposed to the normal predictions.

In summary, we find that the informed but unfettered and nonquantified clinician functioned slightly better than any of the actuarial combinations of objective scores. The relative similarity in performance of the two approaches must be evaluated against the background of a deliberate maximizing after-the-fact of the information contained in the objective indices, even when this meant reversing the intended direction of scoring. Thus, the clinician made his predictions before the fact while the objective procedure was adjusted to maximize its sensitivity after the fact. Under these circumstances one may naturally expect a great deal of shrinkage when the actuarial procedure is applied to an independent sample of observations. Study II was intended to permit an estimate of just how effectively the two systems would function when applied to a new source of data.

STUDY II

In this study we compared clinical judgment with our actuarial procedures when applied to two groups of *Ss* that were distinguished from each other in terms of overt homosexual acts but otherwise were quite different from the *Ss* of the previous study. We were interested in further evaluating the two different methods of prediction and also in examining the situational generality of findings concerned with the relation between a particular TAT sign or index and an underlying disposition or personal attribute.

Method

Subjects. The *Ss* consisted of 30 male prisoners in a state maximum security prison. The group was divided into 14 who were known to have been overtly homosexual prior to imprisonment (11 were convicted of sodomy charges) and 16 who provided no evidence of homosexuality prior to imprisonment or during incarceration. The groups were matched in terms of age, education, intelligence, period of imprisonment, and place of residence. The normal group was selected in such a manner as to exclude persons convicted of crimes of violence, and consequently it included predominately persons convicted of charges related to crimes against property. The *Ss* were paid for their participation in the study and all knew that they were participating in a study that involved, among other things, an interest in homosexuality.

Procedure. The TAT was administered individually (Cards 2, 3BM, 6BM, 9BM, 10, 12, 13 MF, 18 BM) by two male administrators who were unaware of the group to which any *S* belonged. Each examiner tested an equal number of normal and homosexual *Ss*.

The stories were scored for 20 variables according to the procedures developed in the earlier studies by two raters who were unaware of the group to which any *S* belonged. Discrepancies between the two sets of scores were eliminated by discussion between the two raters so that the final score represented a composite rating. The scoring was the same as in the previous study except that the larger number of cards increased the range of scores for a number of variables, and for two variables (4, 11) the numerical score as-

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Variable	M
1	2.3
2	
3	3.5
4	15.7
5	
6	1.7
7	1.4
8	1.9
9	.5
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11	15.9
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The *Ss* were classified by two judges independently as being homosexual or nonhomosexual on the basis of the TAT stories and knowledge of the true distribution of cases in the two categories. One judge (A) was unfamiliar with the objective indices and the findings of the previous studies, but the other judge (B) was intimately familiar with these findings although he did not make any systematic effort to use this information. Judge B was the same judge who had made the comparable ratings in the first study. Each judge divided his predictions into those of which he was confident and those of which he was uncertain.

TABLE 2
DIMENSIONAL TAT COMPARISON OF PRISONERS

	Normal (N = 16)		Homosexual (N = 14)	
Variable	*M*	Freq.	*M*	Freq.
1	2.31		1.86	
2		2		4
3	3.50		3.79	
4	15.75		15.00	
5		4		4
6	1.75		1.93	
7	1.44		1.43	
8	1.94		1.79	
9	.56		.64	
10		0		0
11	15.94		15.86	
12		5		5
13		3		8
14		1		1
15		0		0
16		4		4
17		0		0
18		0		2
19		6		6
20		14		12

Results

Examination of the findings summarized in Table 2 indicates a consistent failure of the objective indices to differentiate between normal and homosexual *Ss* in a manner comparable to that revealed in the first study. Of 20 comparisons only one achieved conventional significance in the predicted direction; there were four reversals in the expected direction of the difference, and most of the 10 group differences in the predicted direction were minute. It seems clear that these indices, even though "validated" in several previous studies (Davids, Joelson, and McArthur, 1956; Lindzey *et al.*, 1958), have little merit when applied under the conditions of the present study.

Not surprisingly, in view of the results for the individual variables, the application of the actuarial procedures used in the previous study to combine these indices were highly ineffective. Whether we use raw scores cumulated (Fig. 3), number of high scores (Fig. 4), or the configural scor-

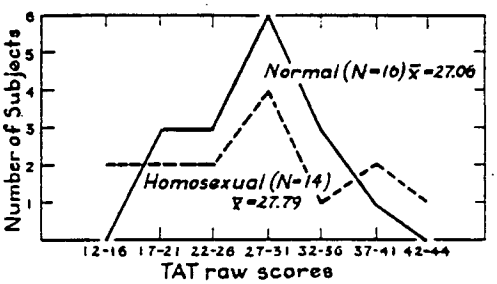

FIG. 3. Comparison of normal and homosexual prisoners on total TAT scores.

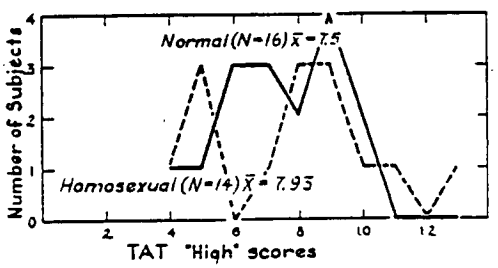

FIG. 4. Comparison of normal and homosexual prisoners on total TAT "high" scores.

ing method, we arrive at the same "hit rate" of 17 out of 30, or 57%. Even an additional, and more complicated application of Lykken's technique failed to improve upon the 57% figure. In this method each *S* was compared with all 40 of *Ss* in the previous study, and for each pair-comparison a deviation score was computed that represented the number of times the two *Ss* were discrepant on a variable (one high and the other low). Then those *Ss* in

the comparison group who had deviation scores of six or less were identified, and a prediction was made based upon whether the majority of these similar patterns had been drawn from homosexual or normal *Ss*.

TABLE 3
ACCURACY OF JUDGES' PREDICTIONS FOR NORMAL AND HOMOSEXUAL PRISONERS

Predictions	*N*	Per cent correct	
		Judge A	Judge B
Over-all	30	80	60
Confident	14	71	86
Uncertain	16	88	38

In contrast, the judges' performance (Table 3), although variable, appears distinctly better. The most efficient of the judges was able to identify group membership with 80% success. While the less successful judge was able to identify correctly only 60% of the cases, of those 14 judgments in which he indicated confidence he was correct in 86% or 12 of the cases. Thus Judge A was able to predict significantly better than chance for all *Ss*, and Judge B functioned well above chance for those predictions of which he was confident; none of the actuarial methods proved able to function above the level of chance.

DISCUSSION

Clinical versus Actuarial Prediction. The studies we have just discussed may be viewed as a direct, although modest, response to a challenge issued by Paul Meehl following a comprehensive review of the clinical-statistical research literature. His survey failed to reveal any clear evidence for the superiority of the clinical method, and he concluded, "I have reservations about some of these studies; I do not believe they are optimally designed to exhibit the clinician at his best; but I submit that it is high time that those who are so sure that the 'right kind of study' will exhibit the clinician's prowess, should *do* this right kind of study and back up their claim with evidence" (Meehl, 1957, p. 272). Our findings, although far from definitive, do provide evidence that, at least under some circumstances, clinical judgment may function somewhat more efficiently than objective and actuarial prediction.

For such findings to be of more than glancing importance, however, it must be possible to state something about the conditions that may have played a role in producing these discrepant results. In the present study it seems to us the events predisposing in favor of the sensitive and informed clinician relate to the psychometric intractability of the TAT. In brief, we have here an instrument that elicits a large amount of complex response data and which is accompanied by very little in the way of rules for effectively transforming or encapsulating these responses within a finite number of scores, variables, or indicants. Thus, although there have been many attempts to establish dimensions or categories for analyzing TAT responses (cf. Lindzey *et al.*, 1959), none of them has met with spectacular success. It appears that the massive and unwieldy qualitative data of the TAT continue to provide predictive cues for the skilled clinician that are not represented adequately in the objective indices upon which actuarial prediction must rest. To generalize, it seems reasonable to expect that, under circumstances where there is little available in the way of sensitive and objective guidelines, the experienced clinician is likely to function relatively better than in a psychometrically highly developed terrain.

It may appear that I am suggesting that clinical predictions function better only in very primitive areas of psychological measurement. Indeed, overlooking the role of the clinician as a source of ideas or hypotheses that may lead to further objectivity and specification, this is precisely what is implied. Insofar as the objective basis for clinical prediction's operating better than chance can be made explicit and verbalized, it will usually prove possible to devise substitutive methods that are freer of error than the human mind. On the other hand, there is little doubt that much of psychological measurement, defined broadly, is still in a very prin
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It is clear, in addition, that conditions in the present study come closer than most studies in this area to meeting the demands that the criterion to be predicted is at least as familiar to the clinician as to the psychometrician. Comparison of the two methods of prediction in connection with academic achievement, or some comparable outcome variable, favors the actuarial method both because this area of behavior is more often studied by psychometrist than clinician and also because the objective indices for predicting such behavior are relatively efficient and readily susceptible to quantitative analysis. McArthur (1956), Meehl (1956), and Cronbach (1960) have pointed to the importance of studying clinical predictions on their home terrain, and all have suggested that here the performance of the clinician may be relatively more encouraging, as indeed it appears to be.

It is worth emphasis that, contrary to a frequent misunderstanding, Meehl has always believed in the probable superiority of the clinician over the actuary under certain circumstances. Indeed, in a recent paper (Meehl, 1959) he has identified six factors that should favor the clinician. The first is *open-endedness*, where the event to be predicted cannot be represented by means of a single dimension or a small number of categories but where the predictor himself is determining the terms or content of the prediction. Second is *unanalyzed stimulus-equivalences*, where the rules for analyzing or classifying the relevant data are not objectively specifiable. Third is the existence of *empty cells*, where particular events or combinations of events have not been observed in the past and consequently have not yet gained a place in the actuarial tables. Fourth is the possible role of *theory-mediation*, where there is an active process of theoretical reasoning and hypothesis formation intervening between the observational data and the particular prediction to be made. Fifth is the situation which offers *insufficient time* for the application of actuarial methods simply because an immediate decision must be made. Sixth is the case where there is a *nonlinear* and particularly a *configural* or pattern association between the predictor variables and the criterion. The performance of the clinicians in the present studies is presumably consistent with the implications of Meehl's statements in regard to "unanalyzed stimulus equivalences" and "empty cells" as factors favoring the effectiveness of clinical prediction. That is, the clinicians responded to stimuli that had not yet been objectively identified and classified, and among these cues there may even have been some that had not been encountered in previous studies and consequently could not have been used by the actuarial methods. It is impossible to completely rule out the role of theory-mediated hypotheses, but the subjective report of the judges and the state of theory in this area make such a contingency most unlikely.

Our findings are only obliquely related to Holt's (1958) distinctions between pure actuarial, naive clinical, and sophisticated clinical prediction. However, insofar as the distinction between naive clinical and sophisticated clinical can be mapped into this study, we would have to place Judge A in the naive category and Judge B in the sophisticated class, on the basis of the fact that Judge B had made comparable predictions from a similar data base before and was intimately familiar with objective findings in this area. Our evidence suggests that the naive clinical judge did at least as well as the sophisticated clinical judge, contrary to Holt's expectation, although one would not like to generalize far from only two judges.

If we recklessly accept the difference between Judge A and Judge B as a real and stable difference, we are faced with the mild embarrassment of increased experience and sophistication appearing to diminish accuracy or sensitivity. Obviously this is not necessarily the case. Judge A may simply have been a better diagnostician, and with increased experience his advan-

tage might have been even greater than it was. However, it is at least possible that experience with predicting this variable under conditions of the first study, and a thorough knowledge of the TAT literature on homosexuality, might make a negative contribution to prediction in the second study. Remembering how poorly the objective indices functioned in the second study, it seems altogether conceivable that if Judge B was deriving many of his diagnostic cues from these indices he might have operated at a disadvantage.

Utility of Projective Technique "Signs" or Objective Indices. In view of the fact that the indices and related variables studied in the present investigations comprise one of the most successful sets of "signs" in the history of TAT research, their almost total collapse upon further cross-validation might be considered a serious indictment of this entire approach to measurement. On the other hand, such a finding should scarcely come as a surprise in view of the many investigations (for example, Kenny, 1954, 1961; Lindzey and Silverman, 1959; Masling, 1960) and formulations (Lindzey, 1952, 1961; Gleser, 1963) that have made clear the extent to which these instruments are responsive to a wide array of diverse determinants. Given this multiplicity of conditions that determine projective technique response, only a small proportion of which are related to personality variables or dispositions, it is inevitable that strictly empirical findings secured in one situation will not be likely to generalize effectively if we change a great many of the situational factors as well as nonpersonality attributes of the *Ss*.

Let us consider some of the respects in which the *Ss* and conditions of test administration differed between our first and second studies. The *Ss* of the second study were much more heterogeneous than *Ss* of the first study in age, socioeconomic status, education, intelligence, employment history, indeed on almost any other variable one might care to mention other than criminality. Not only was the second group more variable on these attributes but also there were sizeable differences in the group average for most variables, including verbal facility, intelligence, and socioeconomic status. The differences in situational determinants of test performance were at least as striking as the differences in demographic and personal attributes. To mention only the most salient of these differences, one group of tests was given in a maximum security prison and another in an institution of higher learning; one group of *Ss* was paid for participation and the other was not; one group of homosexual *Ss* knew the examiner was aware of their homosexual behavior while the other group did not; one group of homosexual *Ss* included a large number who had been harshly punished by society for homosexual acts while the comparable group in the other study included no such *Ss*. A large number of studies have been conducted that demonstrate projective technique responses to vary with conditions such as those just described. Many of these investigations are described or referred to in recent publications by Masling (1960) and Lindzey (1961).

Generalizations of the sort dealt with in this study must be accompanied by a statement of the parametric limits within which they operate, and among the group differences mentioned above there are undoubtedly many such parameters that must be attended to in order to permit effective generalization of findings. To cite only a single illustration, a great deal of the research and clinical literature on projective techniques has tended to ignore the difference between the situation in which the *S* sees the examiner as sympathetically involved in a cooperative and supportive enterprise and the situation in which the *S*, accurately or not, perceives the examiner as hostile, as a barrier to some desired goal, or as the potential revealer of some deeply defended aspect of the *S*'s inner world. There seems little doubt that one of the reasons for the failure of the second study to even approach a replication of the findings of the first study concerns just this difference. Indeed, when reporting the initial results of the first study we indicated that " . . . mo , of the indices o

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homosexuality that functioned successfully tended to be relatively directly related to homosexuality and thus might be expected to be readily subject to censoring or inhibition" (Lindzey *et al.*, 1958, p. 74). Given this observation it is altogether predictable that, with less cooperative *S*s, the TAT indices would fare more poorly.

What has just been said concerning the parametric limits within which one may expect a given relation between projective technique sign and personality disposition to be maintained might be considered banal if it were not for the fact that the majority of studies concerned with such diagnostic relationships fail even to mention the importance of such parameters. Thus, much of the existing interpretive lore, both that based upon controlled research and that derived from clinical observation, is certain to be misleading because there has been no attempt to state the reasonable bounds within which the interpretation or relationship is likely to be sustained.

The sensitivity of the TAT to situational variation is obviously a serious problem for the person interested in enduring and personological traits, albeit the problem is equally perplexing with structured tests and other techniques for assessing personality. Until and unless we are able to identify objective cues that prove to be linked with personality traits in an invariant manner over many different situations, the clinician or investigator must be exceedingly cautious in attempting to make personality inferences concerning respondents who are examined in a novel setting.

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Seer over Sign: The First Good Example

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Professor Lindzey's study is the first (in some fifty published) which demonstrates a clear superiority of the clinical judge over formalized (actuarial) methods of data combination. These clinicians' superiority lay in validity generalization, the semi-objectified "signs" derived from research on college students having negligible validity singly and collectively when applied to a population of maximum-security prison inmates. The data indicate that the clinical experts were not employing the "signs" reported in the research literature. It is suggested that TAT-skilled judges rely on subtle stylistic features of the protocol, which are refractory to scoring categories. Because of their atypicality and the crucial role played by moving to a very different population, the findings should not be generalized to other prediction tasks, kinds of data, or an unselected population of clinicians.

Ten years ago I made a rather unsuccessful attempt to arouse clinical practioners from their dogmatic slumbers (Meehl, 1954). I call the attempt unsuccessful because, while it mobilized emergency emotions and made some sparks fly, I have not as yet been able to detect any significant impact upon clinical practice. In his daily decision-making the clinician continues to function, usually quite unabashedly, as if no such book had ever been written. However, I can perhaps lay claim to having focused attention on a research problem of both theoretical interest and practical importance, thereby generating numerous research studies. Monitoring of the literature in the decade since the book appeared yields a current bibliography of some fifty empirical investigations in which the efficiency of a human judge in combining information is compared with that of a formalized ("mechanical," "statistical") procedure. The design and the range of these investigations permits much more confident generalization than was true on the basis of the eighteen studies available to me in 1954. They range over such diverse substantive domains as success in training or schooling, criminal recidivism and parole violation, psychotherapy (stayability and outcome), recovery from psychosis, response to shock treatment, formal psychiatric nosology, job success or satisfaction, medical (nonpsychiatric) diagnosis, and general trait ascription or personality description. The current "box score" shows a significantly superior predictive efficiency for the statistical method in about two-thirds of the investigations, and substantially equal efficiency in the rest. (In 1954 I mistakenly classified one paper as favoring nonformalized judgment, because I failed to detect its use of a spuriously inflated chi-square.)

It would be difficult to mention any other domain of psychological controversy in which such uniformity of research outcome as this would be evident in the literature. Since Professor Lindzey's paper is the first and *only* empirical comparison of the relative efficiency of the two methods showing clear superiority for the clinical judge, it is deserving of special attention.

Since, as Lindzey points out, commentators have tended to polarize and oversimplify my own views, in reacting to his paper I should like first to say clearly that I incline strongly to accept his results and interpretation. It would be my judgment that we have here the first clear instance of somebody's accepting the statistical challenge and exhibiting a signifi-

cantly superior predictive performance by the human judge. What I have to say by way of further comment or questions should not, therefore, be construed as meaning that I disagree with the author's essential conclusions.

I take it as not in controversy that the clinical judge (proceeding informally or impressionistically) and the "sign" list (employed mechanically) do not differ significantly in the hit-rate achieved on a college population. While the statistical method is given an advantage through the lack of cross-validation, I would be inclined not to assign this factor as much weight as the author does. Cross-validation shrinkage (in the narrow sense) is a very important influence for prediction systems such as regression equations where the actual magnitude of a rather unstable statistic like a beta-weight is used with the idea of maximizing predictive power. But this effect is very considerably reduced when a simple count of signs, based on a median cut or similar dichotomous procedure such as the author employed, is involved. I have seen some striking examples where such an unweighted sign-counting procedure results in negligible cross-validating shrinkage. Presumably the reason for this is that the discriminating *power* of a dichotomous sign is not being weighted, so as long as the signs are at least scored "in the right direction," an unweighted sign-count is not a statistic greatly biased by capitalizing on random error in the criterion sample. (This is especially true, of course, when the selected signs do not represent a small minority of a large potential set such as the MMPI item pool.)

On the clinician's side, we have no accurate means within the data of estimating how much of the fluctuation in hit-rate between the two samples (a drop from 95% hits in Sample I to 80% hits in Sample II) is attributable to random sampling error and how much to the (presumably much more important) factor of validity generalization to a different population. That is, we have no good means, either from theoretical considerations or estimators calculable from the data, of deciding whether there is a difference between the efficiency of the statistical method and the judges in the first study. If we were dealing with the first study taken by itself, we would have to record it in the box score as "no substantial difference." I shall therefore confine my discussion to the striking superiority of the clinical judges in Study II.

In explaining the clinical judges' marked superiority over the statistical sign-combination in Study II, the fascinating question is, of course, "What were the clinical judges *doing*?" I put it this way because the data make it quite clear that the difference in results between Studies I and II lies in the failure of the sign-statistical method to hold up, while the clinical judges did almost as well as in Study I. It is important to realize that we deal here not with shrinkage on *cross-validation* in the strict sense, i.e., that attributable to random sampling fluctuation within the same population, but the very different situation of *validity generalization*, i.e., the extent to which predictor variables function in the same way in a different population. Granted that in theory it will never be the case that any two clinical populations are mathematically identical in their parameters, in practice one can usually assume that shrinkage in passing from one VA Mental Hygiene Clinic sample, say, in Minnesota in 1956 to one in Michigan in 1958 will be largely attributable to sampling fluctuations; whereas moving from a population of college students to a population of prisoners involves a rather marked change in a number of presumably critical variables (demographic, intellectual, psychiatric, test-attitudinal, stylistic). A hard-line protagonist of the statistical method might be tempted to view this fact as a defect of the experimental design, saying that it is "not fair to the statistician" to expect him to make estimates of parameters in a prediction function for a population which he has not yet sampled. I am sure that Lindzey would accept the substance of that observation as a statistical truism. However, as regards the "fairness" aspect, I think that this line of rebuttal would be improper, for the same

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reason that I think it improper when clinicians dismiss the adverse studies by saying it is "unfair" to expect the clinician to know in advance whether a certain predictor variable is relevant to a certain criterion. If the clinician makes judgments under the erroneous impression that the current state of psychological theory or the generalizability of his accumulated clinical experience is such as to permit him to make powerful predictions of a given criterion, this error is part of the clinician's weakness as a predictive instrument. Similarly, I would insist that given the pragmatic context in which the whole issue makes sense —and it is only, I believe, in the pragmatic context that it can be properly formulated as a competition between techniques —then it seems obvious that the ability of a clinician to move successfully into a new population, when the statistical method collapses upon attempting such movement, must be viewed as a manifestation of the clinician's pragmatic superiority under the particular circumstances.

The data indicate that, whereas the clinical judges suffered some loss of predictive power in moving to the prisoner population, their attrition was not nearly as great as the attrition suffered by the sign-statistics, which collapsed to a clinically useless magnitude. That the latters' collapse is mainly a matter of validity generalization rather than pure sampling-error shrinkage is shown by the data in Table 2, where we see that the component signs in the sign-statistic had individually no discrimination power, with a couple of exceptions. Thus we deal here not with a situation in which purportedly "optimal weights" fail because they capitalize excessively upon random error in the initial sample; rather we deal with a situation in which the very *dimensions* being utilized for prediction are for the most part predictively irrelevant within the new population.

On first reading the paper I was impelled to criticize the emphasis in its first two paragraphs upon the clinical judge as "observer," but I think I understand on further thought why the author emphasizes the "observer" aspect as he does. It seems the most parsimonious interpretation of the data to say that the clinical judges were able to do almost as good a job on the prisoner sample as on the college sample, in spite of the fact that the samples differ so greatly in respect to the variables used as statistical signs, because the clinical judges were relying largely, perhaps almost wholly, upon other aspects of the protocol than those aspects represented in the signs. Hence I would myself look upon the author's comments on the "psychometric refractoriness" of the TAT protocol as getting closest to the heart of the matter. Of the (practically) unlimited number of facets or aspects of the verbal behavior recorded in a TAT protocol, it seems that those which the research, and even the articulated clinical tradition, have fixed upon as TAT "signs" of homosexuality are just not the best ones, i.e., "best" in the sense of possessing high validity generalizability.

If we inquire into what these superior aspects might be, we leave the realm of the data for speculation. But if it is permissible to record a hunch, I would hazard a guess that we deal here with some subtle aspects —subtle because highly configural—of a stylistic-expressive nature. I do not, of course, mean something crude like sentence length or verb-adjective quotient or what not, but I do mean some features of the patient's discourse which are relatively closer to the *formal* than to the *contentual* aspects of the stream of speech. It is a pity that the article does not report any introspective account by the judges of what they at least *thought* they were attending to in making the discrimination. But this general line is what has made me more comfortable with the author's "observer" emphasis, because pending further investigation of the inferential process in this situation, I would opt for the working hypothesis that the judges were scanning the material with responsiveness to features of it that have as yet eluded anything like an adequate reduction to scoring categories.

This latter point perhaps renders the investigation somewhat less central in regard to the clinical-statistical issue than it

would otherwise be. As I formulated the distinction (Meehl, 1954, pp. 15–18) the question of relative efficiency is most appropriately asked having first settled upon a defined class of data, whether these data are rockbottom epistemologically or are themselves, strictly speaking, inferences, constructions, or behavior summaries. Thus, for example, in predicting academic success one would normally treat the student's Stanford-Binet IQ as part of the "data." But a little reflection upon the process of administering an individual intelligence test makes it obvious that "clinical judgments" already occur close to the behavior level, as when the examiner must decide how a patient's definition of a word is to be scored when precisely that definition cannot be found among the scored samples in the manual. There is, admittedly, an arbitrary element here because of the ambiguity of the verb "observed" in ordinary language and even in conventional scientific usage. In moving from the patient's stream of behavior to the scored signs, two reductions of data occur: First, only the words are recorded and such behavioral features as rate, tone, expressive movements, and the like are ignored, a factor not relevant in the present study. Second, only certain features of the word sequence as found in the protocol are selected for attention and classified with respect to specified properties, i.e., "scored." Here again, I can understand a temptation on the part of the actuarial protagonist to say that the study does not quite fulfill the criteria for a meaningful test because the two predictive methods do not "start with the same body of data." While this is true in one sense, a sense of which Lindzey is fully cognizant, it is not true in that sense which is pragmatically important. The fact is that the skilled judge reading the protocol impressionistically and the statistical system putting together scores obtained by attending selectively to prespecified features of the record, *do* have access to the "same data," namely a transcript of verbal behavior. At the risk of overstressing a methodological abstraction, one could say as a matter of strict logic or epistemology that, when the statistical method does not begin by scoring the aspects of verbal behavior which the judge responds to impressionistically, from the mathematical point of view this amounts in effect to the actuarial method's assigning a zero weight to those aspects and meanwhile assigning nonzero weights to other aspects which are less predictive, or at least less generalizably so.

I think it is less important to argue the semantic merits of a broad versus narrow use of the verb "observe" than it is to get as conceptually clear as we can about what is actually going on in the situation. There is an interesting symmetry here between the special disadvantages of the two predictive methods, in that Holt's distinction (1958) between the "naive" and the "sophisticated" clinical judge finds its counterpart in the "naive" versus "sophisticated" actuary. Holt wants to make sure, before he will be happy with a comparison of the two methods' efficiencies, that the clinical judge has had an adequate opportunity to consult actuarial experience (including actuarial experience with his own previous judging behavior) so that he can adjust and hopefully improve his subjective weights by whatever psychological means clinical judges do this. Similarly, it will not do much good for the statistician to employ formally powerful mathematical methods of combining scored dimensions if those dimensions are not the right ones to start with. Noting this symmetry, we must nevertheless give due recognition within the pragmatic context of predictive efficiency to a finding that the efforts of clinically knowledgeable investigators to identify the predictively relevant and *population-generalizable* aspects of the stream of TAT speech, and to subject them to a semiobjective response classification procedure ("scoring"), has thus far apparently failed. I should think that the observational and classificatory problem involved here would partake to a considerable degree of the same elements that enter into skillful functioning as a psychotherapist and, therefore, that many of the theoretical consider-

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ations I raised in that respect would be relevant in understanding the findings of the present study (Meehl, 1954, Chapters 6 and 7). I am also inclined to agree with the author's identification of two of my proposed six "pro-clinical" factors (Meehl, 1957) as being most likely operative in this predictive situation.

As must be evident from the character of my comments, I find very little in the paper with which to disagree. I am not entirely happy about the terminology adopted to describe the two clinical judges, especially since the judge characterized as "naive" paradoxically did the better job in both samples and, I take it, significantly better in the prisoner sample. This judge, the late Ephraim Rosen of the Minnesota Psychology Department, was trained by Nevitt Sanford and was an unusually gifted clinician. As the author points out, the other judge's "sophistication," consisting in his own research experience and familiarity with the statistical sign list, may actually have worked to his disadvantage. There is the further consideration that, whereas the explicit identification of predictive signs can never systematically reduce the power of an actuarial method, it may sometimes reduce power when the signs are not treated actuarially but are filtered through the thinking process of a clinical judge. This possibility arises because one of the changes that is likely to occur when a judge succeeds in making explicit a proper subset of the cues to which he is potentially responsive is that his subjective beta-weights on these cues will increase, to the disadvantage of the residual subset of cues which he has not yet brought to the reporting level. Thus Sarbin, in his classical study (1942), found that the well-recognized scholastic predictors HSR and CAT were being subjectively assigned a *larger* proportion of criterion variance by counselors than these two variables actually accounted for. A beautiful instance of this effect can be found in the fascinating article by Berne (1949) in which an intuitively gifted psychoanalyst who had been doing remarkably well diagnosing certain occupations of inductees "at sight" suffered a marked decline in his efficiency as a result of identifying only a *portion* of the cue-family to which he had been originally responding unconsciously.

The only other partial disagreement I would have with the author is based upon literature not extensively known to him, in that he lays some stress upon the relative lack of studies in which the clinician is operating on his own terrain and attempting to predict a criterion with which he has some meaningful clinical familiarity. This criticism has been considerably reduced by the studies appearing since 1954, and I am not convinced that on the basis of the total body of presently available evidence one can plausible attribute the highly consistent and sometimes marked superiority of the statistical method to the use of an inappropriate setting and criterion for assessing the clinician's predictive skills.

Finally, I believe it is needful to enter a *caveat* with regard to the general application of these findings in the pragmatic context of daily clinical decision-making. I have little doubt, on the basis of my long personal acquaintance with them, that both of these clinical judges would be superior to the modal practitioner in a number of dimensions that I can hardly think irrelevant in this task, particularly abstract intelligence, good common-sense judgment, flexibility, and responsiveness to subtle nuances. [While revising the draft of this paper, I received a research report on counselor predictions in which 12 accurately predicting counselors differed from 12 inaccurately predicting ones by 27 raw score points on the Miller Analogies Test, a mean difference of approximately two sigma. No other counselor variable showed any such large differentiation as this measure of "Ph.D.-type brains"; see Watley and Vance (1964).] Investigations involving several clinicians characteristically show significant differences in predictive skill. The average judge does no better than the statistical method and usually somewhat worse; a minority of judges will sometimes succeed in bettering the actuarial procedure. While the functioning of a consist-

ently superior judge is of great theoretical interest, and also could presumably provide one basis for refurbishing the less adequate average judge who performs below the actuarial method, unless individual judges are empirically calibrated with respect to their predictive efficiency over the range of recurring clinical tasks, the present empirical demonstration that these two judges were doing something validly that the scoreable signs were not doing does not help us much in adopting an over-all administrative policy with regard to the optimal method of clinical decision-making. As I have earlier pointed out, a pretty strong case can be made for an overarching decision-policy *to predict by actuarial methods, except when empirical information is available as to the predictive efficiency of the clinicians functioning in an installation;* and the specificity of abilities surely makes it dangerous to assume that these can be assessed by an indirect general method (except perhaps general intelligence) instead of carrying out a major predictive study on each clinic's personnel (Meehl, 1954, pp. 114–116).

With these minor reservations and qualifications, let me conclude by saying that, so far as I am concerned, Professor Lindzey has successfully responded to my "challenge" to do the right kind of study enabling the clinical judge to emerge victorious.

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DEFENSE EXHIBIT H

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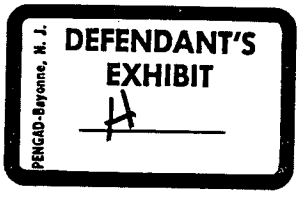
The Prediction of Dangerousness in Juveniles: A Replication



Stephen E. Schlesinger

This study investigates the application of predictor variables identified by nine previous studies and by staff members of a family court and its psychiatric clinic to clinical predictions of dangerousness. The records of 121 juveniles evaluated by the clinic during a six-month period were studied for the presence or absence of the variables. No significant relationships were found in comparisons among predictor variables, clinic recommendations to the court, and subsequent dangerous behaviors. The author discusses the difficulties inherent in field research of this type and the significance of the findings for clinical practice.

A person's potential for dangerous behavior may be evaluated a several points in the criminal justice system. Bail, type and length of sentence, level of institutional custody, and parole may be contingent on psychological or psychiatric review. Dangerous behaviors are commonly defined a those behaviors which result in harm to self or others,[1] and they occur infre quently in the general population.[2]

Much has been written about the relationships between violent behavio and factors in offenders' psychological histories. The conclusion of severa authors, reviewing the complexities of violence prediction, is that such predic tion is futile.[3] Yet, in spite of this, clinical predictions of dangerousness ar frequently ordered by criminal justice authorities throughout the country.

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Grateful acknowledgment is made to Frank Cammarata, Charles Hutchinson, Frank Bocci and their staffs; and to Dr. Donald Bartlett, Dr. Neil Murray, and Norman Rosenberg. Th research could not have been conducted without the assistance of these persons.

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2. C. Kelley, *Crime in the United States—1972, Uniform Crime Reports* (Washington, D.C U.S. Govt. Printing Office, 1973).

3. See G. E. Murphy, "Clinical Identification of Suicidal Risk," *Archives of Gene Psychiatry*, vol. 27 (1972), pp. 356–59; E. Wenk, J. Robison, and G. Smith, "Can Violence Predicted?" *Crime and Delinquency*, October 1972, pp. 393–402; and J. Monahan, "The Preve tion of Violence," in *Community Mental Health and the Criminal Justice System*, J. Monahan ed. (New York: Pergamon Press, 1976), pp. 13–34.

4. B. Rubin, "Prediction of Dangerousness in Mentally Ill Criminals," *Archives of Gene Psychiatry*, vol. 27 (1972), pp. 397–407.

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Table 1. Predictors Identified by Previous Research

Investigator	*Predictors*
Bender	Abnormal EEG
	Epilepsy
	Extremely unfavorable home conditions and life experiences
	Personal experiences with violent death
Cowden	Poor personality prognosis
	Poor institutional adjustment
Hellman and Blackman	Enuresis
	Firesetting
	Cruelty to animals
Glueck and Glueck	Overstrict or lax discipline by either parent
	School retardation
	Truancy
	School misconduct
Guze, Goodwin, and Crane	Sociopathy
	Alcoholism
	Drug dependence
von Hirsch	Known history of violence
	Original commitment for a violent offense
	Commitment for fourth or more time
	History of moderate or serious opiate involvement
	Referred to a psychiatrist on commitment
Wenk and Emrich	Violent admission offense
Justice, Justice, and Kraft	Fighting
	Temper tantrums
	Inability to get along with others
Sendi and Blomgren	Parental brutality
	Exposure to violence or murder
	Sexual inhibition
	Seduction by or perversion in parent
	Unfavorable home environment

Where repetition of predictors occurred among authors, such overlap was eliminated from this table.

Predictions of children's future behavior are often requested as aids in disposing of cases in the juvenile and family courts.[5] These predictions have been of special interest to researchers. Nine studies identified thirty different factors as statistically related to violent behavior in children; the correspondence

5. A. Sussman, "Psychological Testing and Juvenile Justice: An Invalid Judicial Function," *Criminal Law Bulletin*, March 1974, pp. 117–48.

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was judged sufficient to justify their use as predictors.[6] Table 1 contains a summary of these factors.

The purpose of this study was to investigate the obvious discrepancy between these conclusions and evidence that prediction is futile. The predictor variables listed in Table 1, as well as a number of variables believed by the staffs of a family court and its psychiatric clinic to be reliably related to violent behavior, were applied to juvenile cases. Table 2 contains a summary of the number of cases in which each of the predictor variables was found.

The study had three specific objectives. First, it examined the relationship of the predictor variables in Table 2 to the clinic staff's recommendations to the court. These recommendations presumably reflected the staff's estimate of the probability of future violent behavior by the juveniles assessed. Second, it examined the relationship of the predictor variables to the juveniles' subsequent behavior. Finally, the clinic's recommendations were compared with the subsequent behavior of the juveniles.

Decisions regarding custody and parole are often based on clinicians' predictions,[7] which assume a relationship between the predictor variables and the anticipated violent behaviors. If the relationships do not in fact reliably exist, use of present prediction paradigms may be unfair.

METHOD

Subjects

Subjects for this investigation were 122 juveniles evaluated by the clinic between January 1 and June 30, 1973. The clinic evaluated 275 juveniles during this time; however, the sample included only those juveniles who reached

6. L. Bender, "Children and Adolescents Who Have Killed," *American Journal of Psychiatry*, vol. 116 (1959), pp. 510–13; J. E. Cowden, "Predicting Institutional Adjustment and Recidivism in Delinquent Boys," *Journal of Criminal Law, Criminology and Police Science*, March 1966, pp. 39–44; D. Hellman and N. Blackman, "Enuresis, Firesetting and Cruelty to Animals: A Triad Predictive of Adult Crime," *American Journal of Psychiatry*, vol. 122, no. 6 (1966), pp. 1431–35; S. Glueck and E. Glueck, *Predicting Delinquency and Crime* (Cambridge, Mass.: Harvard University Press, 1967); S. Guze, D. Goodwin, and B. Crane, "Criminal Recidivism and Psychiatric Illness," *American Journal of Psychiatry*, vol. 127, no. 6 (1970), pp. 832–35; A. von Hirsch, "Prediction of Criminal Conduct and Preventive Confinement of Convicted Persons," *Buffalo Law Review*, vol. 21 (1972), pp. 717–58; E. Wenk and R. Emrich, "Assaultive Youth: An Exploratory Study of the Assaultive Experience and Assaultive Potential of California Youth Authority Wards," *Journal of Research in Crime and Delinquency*, July 1972, pp. 171–96; B. Justice, R. Justice, and J. Kraft, "Early Warning Signs of Violence: Is a Triad Enough?" *American Journal of Psychiatry*, vol. 131, no. 4 (1974), pp. 457–59; and I. Sendi and P. Blomgren, "A Comparative Study of Predictive Criteria in the Predisposition of Homicidal Adolescents," *American Journal of Psychiatry*, April 1975, pp. 423–27.

7. S. E. Schlesinger, The Prediction of Dangerousness in the Criminal Justice System: A Review of the Literature (Unpub. paper, State University of New York at Buffalo, 1976).

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ble 2. Number of Cases in Which Predictor Variables Were Found

Variables Identified by Previous Research	*Number of Cases*
Abnormal EEG	3
Epilepsy	3
Extremely unfavorable home conditions and life experiences	5
Poor personality prognosis	1
Poor institutional adjustment	17
Enuresis	10
Firesetting	4
Cruelty to animals	1
Overstrict or lax discipline by either parent	12
School retardation	1
Truancy	66
School misconduct	40
Sociopathy	1
Alcoholism	10
Drug dependence	2
Known history of violence	1
Original commitment for a violent offense	2
Fighting	20
Temper tantrums	14
Inability to get along with others	5
Parental brutality	14
Exposure to violence or murder	4
[illegible]tion by or perversion in parent	4
Variables Identified by Court and Clinic Staff	
Sex of juvenile	—
Religion	—
Race	—
Amount of education	—
Reading below grade level	56
Judge	—
Child is adopted	3
Child has a physical defect	10
Parent is absent from the home or deceased	50
Father is/was an alcoholic	34
Mother is/was an alcoholic	12
Parents are separated/divorced	40
Number of children in the family	—
Marital discord between parents	5
Family is disorganized/dysfunctional	32
Child is a loner	10

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their sixteenth birthday after the one-year follow-up period (on or after July 1, 1974). Table 3 contains the demographic characteristics of the sample.

Procedure

The study examined the records of juveniles referred by the family court to the court's psychiatric clinic for evaluation before disposition of the case. Collected from each file was all information about the juvenile available to the clinic staff and the judges. Criteria used in formulating the recommendations were contained in the records of the clinic's social worker, psychologist, and psychiatrist. Two sources yielded data on offenses committed by each juvenile during the one-year follow-up period: The family court's files provided information on offenses leading to reopened files, and the probation department's records provided information on probationary contacts with the juveniles.

Chi-square analyses were performed for 124 comparisons among predictor variables, clinic recommendations, and criterion behaviors. If the clinic recommended to the court that the juvenile be detained either in a closed facility or in a medium-security facility with supervision, a prediction of dangerousness was presumed. A recommendation of detention in a supervised facility might be based on other factors, such as general emotional

Table 3. Demographic Characteristics of the Sample

Sex		Education	
Male	67%	Still in school	80%
Female	33%	Source of referral to court	
Average age		Police	29%
Overall sample	13.0	Mother	25%
Males	13.0	School	22%
Females	13.0	Father's age	
Whites	13.0	Average	45.0
Nonwhites	12.9	Mother's age	
White males	13.1	Average	40.0
Nonwhite males	12.8	Marital history	
White females	12.9	Parents married	42%
Nonwhite females	13.1	Parents separated/divorced	33%
Race		Number of children in the family	
White	66%	Average	5.3
Nonwhite	30%	Intellectual level of the juveniles	
Unlisted	4%	Average I.Q.	92.5
Residence		Reading below grade level	33%
Urban	70%	Average number of levels below	3.8
Suburban	17%	Reading at grade level	13%
Rural	13%	Reading above grade level	12%

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Table 4. *Recommendations to the Court*

Placement Recommendations	*Number of Cases*
Placement in an open facility with structure	18
Placement in a closed facility	8
Placement in a foster home	11
Placement with other relative	5
Removal from the home—unspecified placement	7
Remain in present living situation	2
Other placement recommendation	4
Other Recommendations	
Probation	32
Suspended sentence	2
Academic or training programs	8
Counseling/psychotherapy for juvenile and/or family	41
Other recommendations	3
No recommendation made to the court	30

Some files contained more than one recommendation to the court.

problems needing institutional care; however, these juveniles' records revealed that clinicians believed the youngsters to be potentially violent. The two hypothesized groups of predictors—one from previous research efforts and the other from court and clinic staff—were compared to the clinic's final recommendation to the court, then to the future acting-out behaviors of the bjects. Table 4 lists the types of clinic recommendations to the court, and able 5 lists the criterion (or follow-up) behaviors found in juveniles' files. The sample was divided into two groups for each comparison: The histories of the first group contained the predictor variable; the histories of the second, or control, group did not include the variable being tested.

RESULTS

Two striking patterns are evident in the data. First, the incidence of violent acting-out behaviors among the juveniles referred to the clinic is low: 19 of

Table 5. *Criterion Behaviors*

Type of Behavior	*Number of Cases*
Violent offenses	7
Burglary or larceny	5
Person in need of supervision (PINS)	15
Runaway	7
Other	6

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the 122 juveniles, 15.6 percent, had been referred to the court for violent offenses. Only 7 of the 122 juveniles, or 5.7 percent, committed violent or dangerous offenses during the follow-up period. Second, none of the chi-square analyses indicated a systematic relationship among predictor variables, clinic recommendations, and criterion behaviors. Moreover, the relationship between predictions of dangerousness and subsequent violent behaviors was not significant: $X^2(1) = .8990$; $p = .3458$.

DISCUSSION

Clearly, these results do not support the conclusions of the researchers cited above. Nor do they substantiate the assumptions of court and clinic staff that other variables are systematically related to subsequent dangerous behaviors. Two explanations may help to account for the discrepancies.

The first concerns methodological issues related to prediction research. Inherent in field research of this type are several important limitations. First, identification of variables in juveniles' histories has necessarily been by sources recalling developmental details of each offender's past. The accuracy of the recall and, hence, the reliability of the variables cannot be firmly established.

Second, the reasons why judges order presentence evaluations are unknown. Judges refer approximately 15 to 20 percent of their cases to the clinic each year, but the bases for selecting this potentially biased sample are unclear. By focusing on a sample composed solely of offenders, researchers may introduce additional bias into their evaluations. A higher relative incidence of antisocial acts is to be expected in a population of offenders than in the general population. The possibility of finding significant relationships in this type of sample is enhanced by the elimination of cases which would dilute the strength of those relationships.

Third, the listing of offenses in offenders' records may not be accurate—the actual offenses may have been obscured by plea bargaining. Thus, the offenses listed may be of less legal consequence than those actually committed. Since the effects of plea bargaining on the records of juveniles in the sample are unknown, this must remain a potential source of bias.

Fourth, the predictors identified by previous researchers may be difficult to evaluate in specific cases. Categories such as "extremely unfavorable home conditions," "inability to get along with others," and "fighting" are very broad; they are not defined sufficiently to be reliable in evaluating individual records.

Fifth, the follow-up data may be influenced by two factors. Prediction of dangerousness may result in the detention of the (allegedly) violent juvenile. If detained, the juvenile is removed from those circumstances in which he might exhibit dangerous behavior. Thus, he is prevented from generating additional follow-up data for studies evaluating the reliability of predictors of

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langerousness and the accuracy of the predictions themselves. Further, it may be that an intervention during detention reduces the juvenile's potential for violent behavior. Given any of these circumstances, researchers cannot fully evaluate the accuracy of predictions.

A second explanation for the discrepancy in findings concerns the manner in which the results of prediction studies are interpreted and the nature of the concept of dangerousness itself. Other authors have discussed the difficulty of predicting low base rate behaviors;[8] the conclusion from a review of the literature and from many empirical studies is that low base rate behaviors cannot be predicted sufficiently to warrant their use in clinical practice. In his review of the empirical literature, Monahan discovered reports of rates of false positive predictions ranging from 54 percent to 99.7 percent. He concluded that

> violence is vastly overpredicted whether simple behavioral indicators are used or sophisticated multivariate analyses are employed, and whether psychological tests are administered or thorough psychiatric examinations are performed.[9]

Where relationships between predictor variables and criterion behaviors have been shown to be statistically significant, such relationships have been based on evaluation of large samples. Further, a large number of statistical tests have been performed on the samples. Seldom considered in the reporting of results is the statistical problem of random generation of significant results. That is, if the significance level of .05 is chosen by investigators, and if many tests are done for relationships among a large number of variables, then the investigators must expect that 5 percent of the significant relationships may be generated by chance alone. Reports of research do not generally specify whether statistical tests have included procedures for correcting this statistical relationship among the many tests performed, or whether the number of reported significant relationships exceeds that which can be expected on the basis of chance alone. I suspect that in most cases it does not exceed the level of chance.

Significant relationships among variables found by previous researchers

8. A. Rosen, "Detection of Suicidal Patients: An Example of Some Limitations in the Prediction of Infrequent Events," *Journal of Consulting Psychology*, vol. 18, no. 6 (1954), pp. 397–403; P. Meehl and A. Rosen, "Antecedent Probability and the Efficiency of Psychometric Signs, Patterns, or Cutting Scores," *Psychological Bulletin*, vol. 52 (1955), pp. 194–216; J. Livermore, C. Malmquist, and P. Meehl, "On the Justifications for Civil Commitment," *University of Pennsylvania Law Review*, vol. 117 (1968), pp. 75–96; E. Megargee, "The Prediction of Violence with Psychological Tests," in *Current Topics in Clinical and Community Psychology*, C. Spielberger, ed. (New York: Academic Press, 1970), pp. 98–156; Murphy, "Clinical Identification of Suicidal Risk"; Rubin, "Prediction of Dangerousness in Mentally Ill Criminals"; Wenk et al., "Can Violence Be Predicted?" and B. J. Ennis and T. R. Litwack, "Psychiatry and the Presumption of Expertise: Flipping Coins in the Courtroom," *California Law Review*, May 1974, pp. 693–752.

9. Monahan, "The Prevention of Violence."

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may be a result primarily of the large sample size. If we compare the large number of cases upon which the research investigations were based with the small number in clinical practice, the clinicians' difficulty in applying research results becomes clearer. It may be that the *statistical relationships* between predictor variables and criterion behaviors which research has identified do not lend themselves to reliable *clinical* applications.[10]

Researchers and clinicians have both tended to view "dangerousness" as a phenomenon unto itself and, as such, have sought to predict its occurrence. But what do we really know about this construct? We are, in fact, largely ignorant of its parameters. We know violent acts occur relatively infrequently in the general population, and we define the incidence of such acts as unacceptable. But that is really all we know. We have not established that such a thing as "dangerousness" exists separately from the acts by which we have identified it or is an entity unto itself at all. That is, might it be more appropriate to view the occurrence of these abhorrent acts as situationally determined, transitory, and therefore less amenable to identification in terms of a psychological construct? If so, then we must develop procedures for systematically recording the social context of violent acts. Such records would permit investigation of the acts as situational or socioecological occurrences.

CONCLUSIONS AND IMPLICATIONS

Predictors of violent behavior identified by previous researchers were not substantiated by this study. Future efforts to predict dangerousness will probably meet similar success. We may be wrong in our definition and study of dangerousness as an isolated factor, and the very state of the art of predicting such behaviors may well be moribund. Perhaps we should reconsider our conduct as professionals in light of this rather dismal state of affairs.

If we cannot reliably predict violent behavior, how can we justify our continued detention of juveniles evaluated as violent? Can the use of unsubstantiated and demonstrably unreliable techniques be professionally and ethically justified? And how shall we balance the right of individuals to remain free from the control of others and society's need to protect itself from those few who will become violent? The fairness of the present policies is dubious.

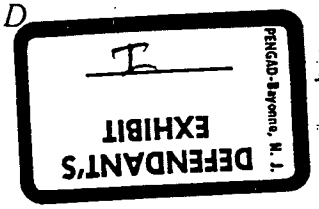
10. See, for discussions of the problems of clinical versus statistical predictions: H. Gough, "Clinical versus Statistical Prediction in Psychology," in *Psychology in the Making*, L. Postman, ed. (New York: Knopf, 1962), pp. 526–84; J. Sawyer, "Measurement *and* Prediction, Clinical *and* Statistical," *Psychological Bulletin*, vol. 66, no. 3 (1966), pp. 178–200; and J. Lick, "Statistical vs. Clinical Significance in Research on the Outcome of Psychotherapy," *International Journal of Mental Health*, vol. 2 (1973), pp. 26–37.

DEFENSE EXHIBIT I

1, 13 + CDS

9

rge B. Palermo,[1] M.D.; Frank J. Liska,[2] J.D.;
k T. Palermo,[3] M.D.; and Gloria Dal Forno,[4] M.D.



the Predictability of Violent Behavior: nsiderations and Guidelines

FERENCE: Palermo, G. B., Liska, F. J., Palermo, M. T., and Dal Forno, G., **"On the dictability of Violent Behavior: Considerations and Guidelines,"** *Journal of Forensic Sci-ce*, JFSCA, Vol. 36, No. 5, Sept. 1991, pp. 1435–1444.

STRACT: Following a semantic discussion of dangerousness, and having established its namic concept, the authors define the prediction of dangerous behavior as the anticipation an antisocial act towards others. The present-day dilemma of predicting dangerous behavior iscussed. An extensive review of sociological and psychiatric studies is presented. Further, authors stress the vital importance of predicting violent behavior in view of statistical a concerning rampant violent crime in the United States. They encourage more cooperation ween psychiatric experts and the judicial system in view of the common social problem are faced with. Better diagnostic procedures and more logically deductive factual expert orts are hoped for. The authors postulate that prediction is strictly connected with the ssible prevention of dangerous behavior and the continuation of a civilized, secure society.

EYWORDS: psychiatry, mental illness, dangerousness, violent behavior, predictability, urity

agnosis, prognosis, and treatment are the essence of the medical profession. The ological root of the word *prognosis* derives from the ancient Greek *pro-*, meaning re," and *gignoskein*, meaning "to know" [*1*]. While he may not actually have red more than a half dozen of the 70 works of the so-called Hippocratic collection, ocrates, in the fifth century B.C., in works entitled *Prognostic, Coan Prognosis, Aphorism*, is credited with the then-revolutionary idea that, by observing enough a physician could predict the course of the disease. Many feel that these works been the most important ones in freeing ancient medicine from superstition. Sur-gly, some 25 centuries later, in the field of psychiatry, there is controversy about ability of practitioners and the extent to which they are able to predict behavior, cularly violent behavior, in their patients.

ppeport [*2*], already in 1967, thought that psychotic people are not particularly to be assaultive or to commit suicide. The *Arizona Law Review* [*3*] questioned, 71, the accuracy of psychiatric predictions regarding dangerousness. Following the edy assassination, an American Psychiatric Association study (reported by Rappe-

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port [2]) showed that the incidence of criminal behavior among former patients of mental institutions was not significantly higher than that among the general population.

Obviously, dangerous behavior is not necessarily a manifestation of mental illness, even though some crimes, because of their heinousness, are thought to be the outcome of a psychotic state. Society, appalled by such crimes and in self-defense, in an attempt to maintain the security of its social development, usually alienates the perpetrator. "Dangerous" as an adjective is attributed to something or someone that may bring about a harmful event. Accordingly, dangerousness, which does not take place in a vacuum but during an interrelationship among people in an evolving world, assumes a dynamic concept. A distinction should be made between prognosis as used in medicine, which relates to an intrapersonal body dysfunction, and prediction of dangerousness, which implies a behavioral manifestation that takes place on an interpersonal level. Prediction of dangerousness is the prediction of abnormal dangerous behavior and does not always correspond to a prognostic evaluation. Therefore, prediction of dangerousness is here intended as the anticipation of a dangerous act, usually directed towards others. Regardless of the semantics used, there has never been a greater need for the prediction of violent behavior in our society.

Sociological and Psychiatric Studies

In 1980, the number of homicides in the United States was 23 040, higher than at any previous time in this century [4]. As the years have gone by, the problem of violent crime has assumed frightening proportions. Statistics [5] reveal that 20 675 Americans were murdered in 1988, an increase of 2.9% over the previous year. The slayings occurred primarily in the nation's cities, which experienced a 4% increase in the number of murders. The number of murders increased 10% in the Northeast, 4% in the South, and 1% in the West, while the Midwest had a 3% decline in the number of slayings. The nation's overall murder rate was 8.4 per 100 000, but the major city with the highest rate, Washington, DC, reported a rate more than 7 times as high, 59.5 per 100 000. A recent report [6] states that, "although the federal government has not compiled nationwide statistics on killings in the first half of 1990, police departments in more than a dozen major cities report increases ranging from 10% to more than 50% over the figures for the first six months of 1989. It seems that the nation's murder rate, after dipping in the mid-1980s, has resumed a strong upsurge and . . . may even surpass the record year of 1980, when 23 040 people were slain." The above statistics clearly show that the prediction of dangerous behavior in our society is of vital importance.

The authors are aware of the many studies that take issue with the appropriateness and accuracy of clinical predictions of violence. Halleck [7] and Diamond [8] stated that objective data could not be offered in support of predictions of violence to justify the restriction of a person's freedom. Negative statements regarding the reliability of predicting future violence have been made by the American Psychiatric Association [9], the American Psychological Association [10]. In 1978 the American Civil Liberties Union [11] categorically stated that mental health professionals have no expertise in predicting future dangerous behavior. A sizeable group of psychiatrists, psychologists, and lawyers surveyed by Kahle and Sales [12] gave a 40 to 46% mean predictive accuracy for violent behavior. In 1963, Szasz [13] had already stated that prediction of violence destroys the helping role of the mental health disciplines.

The difficulty in predicting dangerous behavior is well known and well accepted by all. "Science, particularly in its applied form, can never achieve the perfection and certainty of the law," says Tanay [14]. That should not be a deterrent in searching for guidelines that would make our diagnostic judgment more accurate, even though a legal decision relative to reasonable forseeability (reported by Tanay [14]) does not facilitate the task at hand. In the midst of diverse, frustrating opinions that may be

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produced a confusing forensic-psychiatric climate, the statements by Monahan [*15*] loom large as a stimulating, illuminating beacon: "There is nothing alien about using predictions of the future behavior of others to guide our conduct: it is hard to imagine life without such assumptions, both of the continuities and discontinuities of the behavior of others and without reliance on such assumptions. It would certainly be difficult to cross a city street; driving a car would be unthinkable." He further states, "Predictions of dangerousness are a necessary factor in regulating the relationship between individual and state. We are more concerned with the moral problem raised by the use of long-term predictions of violent behavior, predictions concerned with months and years, not hours and days." Violent behavior has become so rampant in our society during the past decade, because of the widespread use of drugs and an ever-increasing impulsive unleashing of hostile feelings in families and society at large, that a better effort should be made to anticipate, and so prevent, "acts characterized by the application of overt threat of force which is likely to result in injury to people" [*16*].

One should be aware that, at times, violent behavior is not reported to the police. According to the 1978 National Victimization Panel [*17*] only 47% of those persons who stated that they had been the victim of a violent crime reported the act to the police.

In the field of psychology Freud, himself, dealt with the problem of human aggressiveness (reported by Becker [*19*]). He stated that human aggressiveness comes about through a fusion of the life instinct with the death instinct. The death instinct, representing the organism's desire to die, would be changed into redirecting these negative impulses outwardly. Dying, or the desire to die, would be replaced by the desire to kill, and the basic death instinct would then be defeated. Contrary to Freud's idea, Otto Rank, one of his pupils, stated beautifully (as reported by Becker [*19*]), "The death fear of the ego is lessened by the killing, the sacrifice, of the other; through the death of the other, one buys oneself free from the penalty of dying, of being killed." Rank had a profound and existential approach to the problem at hand.

Much closer to us, Karl Menninger [*20*] attempted to explain human aggression with his theory of dysfunction/dyscontrol. He claimed that an explosive, destructive act, or a series of acts, is the outcome of internal disorganization, ego weakness, and its incapacity to control basic, dangerous impulses. He thought that chronic, repetitive, aggressive behavior, or episodic, impulsive violence, such as homicidal assaultiveness, could be explained in this manner. A recent study [*21*] confirms this, "A decompensating patient with poor impulse control may be at risk for violence in the community regardless of the diagnosis." In that study, the diagnoses of both schizophrenia and mania were associated with dangerous behavior, and many patients were more unpredictable and emotionally explosive during the first period of their hospitalization.

The psychological predicting factors of a childhood history of maternal deprivation, poor father identification, nocturnal enuresis, fire-setting, violence towards animals, and abuse by one or both parents cited by Goldstein [*22*] do not necessarily hold true. Indeed, Diamond [*8*] stated, "Yet I have repeatedly found some, and sometimes all of these predictive factors, in individuals who have never committed even the slightest harmful act, let alone assault or murder. I have examined offenders who have committed the extraordinarily brutal acts of great violence and lethality who possessed none of these factors." It must also be pointed out that the original pioneer studies of the use of the Minnesota Multiphasic Personality Inventory (MMPI) in order to predict delinquency [*23*], especially those using the psychopathic deviate (Pd) scale, were recently found to be inconclusive by several surveys. The most recent of these is that of Tannenbaum in 1970 [*24*].

Without getting involved in the dispute between the nature and nurture theories of the origins of criminal behavior, we must recognize that the majority of the inmates in jails in the United States have a low-normal intelligence quotient (IQ), as has been established by psychometric testing. The contention that IQ scores are strongly related

to crime has been supported by Hirschi and Hindelang [25], who concluded that "the weight of evidence is that IQ is more important than race and social class for predicting criminal behavior." The above view has also been supported by more recent research by Moffit, Gabrielli, Mednick, and Schulsinger [26]. In their Danish studies, they concluded that children with low IQs may be more prone to engage in delinquent behavior. Those children also failed in school because of their poor verbal ability. "Such initial experiences may contribute to later delinquency in many ways: by creating a negative attitude towards authority . . . seek[ing] awards in a less socially desirable setting . . . [being] more sensitive to delinquent peer pressure."

The study by Wolfgang, Figlio, and Sellin [27] and that by Wolfgang [28] stress the importance of a juvenile record in the past life of an adult offender and point out that variables of race and socioeconomic status were most strongly associated with reported delinquency. These findings confirmed the classical study by Wolfgang and Ferracuti [29].

An article by Yesavage, Werner, Becker, and Mills [30] points out that the psychiatrists they reported on in their study used patients' hostility as a predictor of future violence. They also stressed the importance of suspiciousness, tension, excitement, and a prior assaultive act as predictors of dangerous behavior. Monahan's model [31], in assessing dangerousness, blends three types of prediction: anamnestic, actuarial, and clinical. His suggestions are for a short-term and specific prediction of dangerousness. Among the various traits described by Ostrov et al. [32] in assessing dangerousness, we find poor reality testing, thought disorder, paranoid thinking, excited rage, impulsivity, and superego deficit. He emphasizes the lack of coping skills, of empathy, of introspection, of the ability to reach out for people, and of a sense of humor. Bidinotto [33] lists the following dangerous traits of the serial killer: he or she shows less regard for the rights and feelings of peers, irresponsibility, disregard for authority, failure to abide by rules and regulations, and lack of moral conscience. In addition, a correlation has been made between the MMPI scales and hostile, explosive, psychopathic, violent behavior, and between the Rorschach test color responses and impulsivity and manifest hostility (reported by Starke, Monachesi, and Young [23]).

The study by Tancredi and Volkow [34] brings to the debate some neurophysiological factual understanding of violent behavior. Indeed, positron emission tomography (PET) studies reveal that defects in brain functioning are related to particular behavior and that specific defects may be at the basis of an individual's dyscontrolled acting out. The recent study on schizophrenics by Adams, Reid, and Moritz [35] supports the thesis that one's patient histories of violence, especially severe histories, are associated with neurophysiological dysfunction. In addition, when diffuse neurophysiological brain dysfunction leads to violent behavior, "such behavior tends to be recurrent or perseverative—an ongoing trait . . . . This would tend to explain the presence in the IMP group—neurophysiologically impaired schizophrenic (Luria Nebraska Neuropsychological Battery) tested by Golden, Hammecke, and Purish [36] of the very highest 'career violence' individuals." The study by Jarvie [37] that showed the frontal lobe region lesions acting as a disinhibitor of social control was further corroborated by a study by Blumer and Benson [38]. The study of Grafman et al. [39] stresses the tenet that psychiatric sequelae and personality changes are common following frontal lobe damage. A pseudopsychopathic personality characterized by a lack of impulse control, irritability, anger, and hostility usually ensues from orbitofrontal lesions. Results of these studies suggest that chronic, recidivistic, violent behavior, even though a minimal part of the larger bulk of criminal offenses, may have a biological and neurophysiological predisposition. That predisposition also derives from a rather complex interaction between multiple genetic factors and their reaction to the environment [40]. One can hope that in the near future higher technology, including single photon emission computed tomography (SPECT), will also help in the prediction of dangerous behavior.

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The most important variable in the prediction of violence, says Stone [41], is the actual st criminal conduct. This tenet accords with a major dictum of Freudian psychoanalysis, at history is the best prediction of future behavior. Even though one fully agrees with tone's statement, its limitations must be recognized when confronted with individuals hose past does not show overt criminal behavior.

The American Psychiatric Association (APA) task force members [9] who investigated he problem of predicting future dangerousness have come up with opposite, controver- ial, and confusing statements, such as, "Judgements are fundamentally of very low eliability . . . . Past behavior must be clearly repetitive . . . . Recidivism is specific to he previous crime . . . . Immediacy of harm, likelihood of harm, cannot be stressed rongly enough . . . . Some persons are at a comparatively higher risk for future violence han are others." Karl Menninger [20] warned us. "It is the possibility of unusual behavior at we have to anticipate and predict." Hans Toch [42] includes among types of unusual ehavior "the unstable, who may shoot because of a propensity to be clumsy, boisterous, arful, touchy or sadistic."

False-positive predictions of dangerousness also raise a problem. Wettstein [43] in 1988 ted, "Predictive reliability and accuracy remain poor, and significant numbers of false sitive predictions continue to be made." In a study by Kozol, Boucher, and Garofalo 1972 [44], it is reported that staff incorrectly predicted violence two times out of three. e study by Cohen, Groth, and Siegel in 1978 [45] showed, on the contrary, that 86% staff predictions were correct.

In addition, moral and political issues have been raised by the questionable prediction dangerous behavior. Von Hirsch aptly stated [46]. "Predictive restraint poses special ical problems. The fact that the person's liberty is at stake reduces the moral ac- ptability of mistakes of overprediction. Moreover, one may question whether it is ever t to punish someone more severely for what he is expected to do even if the prediction accurate."

In the midst of such diversity of opinion, the California Supreme Court with *Tarasoff* in 1976, created a legal duty for mental health professionals to diagnose and predict ngerousness [47]. Many experts have concluded that the prediction of dangerousness more a sociolegal judgement and that dangerousness itself is neither a psychiatric nor edical diagnosis. The previously mentioned APA task force report [9] also stated, me persons are at a comparatively higher risk for future violence than others." It is ctly those "some persons" that one would like to detect and predict. Many authors e stated that it should be up to the judiciary to assume the responsibility for making a sociolegal determination. However, psychiatric or psychologic expert testimony ld certainly help the judiciary in reaching such a difficult responsible decision as the diction of dangerousness.

lections

ne should not deduce the possibility for future dangerousness from an isolated, vidual trait, even though it may have the connotation of dangerousness. It should be embered that violent and dangerous acts are relatively infrequent, occur in rather cific interpersonal and situational contexts, may be state dependent (under the influ- e of alcohol or other drugs), and may not be representative of the individual's more cal behavior. In favor of intuitive clinical judgement over actuarial predictions of nce is the statement by Meehl [48] that "clinical judgement may be the only feasible t-term prediction strategy especially in emergency situations."

he authors fully agree with the statement by Cohen, Groth and Siegel [45], "It is a ilous, narrow path . . . to balance order and liberty properly . . . a socio-political and a clinical issue and this must be done by society's courts and legislature. The experts ld not attempt to usurp society's rights in resolving the conflict between safety and

liberty." However, the views of Morris and Miller [49] should not be disregarded when they aptly state, "A merciful and just system of punishment presupposes leniency towards those who least threaten social injury; and this, in turn, inexorably involves predictions of dangerousness." Peszke's [50] concern with the welfare of the individual should also be kept in mind.

The psychiatry/psychology experts have psychiatric/psychological knowledge regarding the individual assessed by them. Their participation as professionals in the forensic field and the very fact that they, themselves, are members of society should make them welcome and appreciated in such important and complex decisions. Even though the prediction of dangerousness is a difficult task, one can assume that the forensic psychiatrist's knowledge and experience can provide better expertise than those of Szasz's common man.

The study by Cocozza, Melick, and Steadman [52] revealed that the higher rate of violent crime committed by released mental patients can be accounted for primarily by those patients with a record, particularly an extensive record, of criminal activity that predated their hospitalization. Nonetheless, the deinstitutionalization of the latter accounts for a large group of misdemeanants who occasionally, under stress, may become violent offenders. Most of the violent offenders, however, are young, unmarried, unskilled, and prone to the use of drugs and alcohol [53].

The studies by Wolfgang [54] and by Petersilia, Greenwood, and Lavin [55] provide reasonable, accurate estimates further supporting the validity of clinical prediction of violence. Petersilia, Greenwood, and Lavin [55] also state the following, "One third of the individuals predicted to be violent who were arrested for a violent crime are, in fact, the same people who are committing most of the unreported and unsolved violent acts." And even though there is no consensus regarding the relationship between mental disorder and violent behavior, the recent study by Collins and Baily [56] reports that Howells in 1982, after reviewing relevant studies, concluded that "the link between depression and serious violence, such as homicide, is the most widely accepted in clinical practice." The study by Bland and Orn [57] "found recurrent depression . . . an important factor in family violence." On the other hand, Monahan's [16] statement, "Mental patients who do not have a record of violent arrests are, if anything, less violent than the general population," should always be taken into consideration. The evaluation of future dangerous behavior, therefore, should be an integration of clinical psychiatric judgment and legal assessment.

The following factors should be taken into consideration by the expert when assessing the probability of an individual's future violence: *Sociological and environmental variables*—the age, sex, race, and employment status of both possible offenders and possible victims; relationship between offender and victim; base rate for violent behavior; past history of physical force to resolve conflicts; previous arrest records, in particular for offenses against the person, including aggravated assault; exposure to violence in the family; lack of social competence; purchase of a gun; problems with authority figures; distortion of relationships with men or women; availability of victims, availability of weapons, availability of drugs; drug and alcohol use; city dwelling; cultural and subcultural group; and climatic conditions. *Psychological variables*—unstable disposition, impulsivity, and proneness to act out against others in a disruptive, destructive way; lack of emotional concern for others; aggressive fantasies and planning of vengeance; lack of inhibitions; deeply repressed hostile feelings; depression or dysthymia; delusions of persecution; previous institutionalization, either in a mental hospital or a prison; past threats to kill; loss of consensual view of reality; inability to cope with anger and sexual impulses; acceptance or nonacceptance of guilt and personal responsibility for violent acts committed or fantasized. *Biological and neurophysiological factors*—47-XY or XXY chromosome; low IQ; head injury; electroencephalogram (EEG) abnormality; temporal lobe epilepsy; limbic ictus; tumors and neurophysiological dysfunction of the frontal lobe.

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It is legitimate to presume that an individual whose psychiatric-legal history reveals several of the above personality traits or historical, genetic, or neurophysiological factors might, in all probability, and to a reasonable degree of medical certainty, have a higher propensity to act out in a violent way against others.

Perusal of the literature reveals that most of the factors listed above have already been described in the past by many authors [*15,18,30,32,33,42,58–63*]. Nonconsideration or downright dismissal of past observations and reflections deprives one of the benefits derived from history. Therefore, it would be advisable to search for the presence of the above factors in assessing the probability of dangerousness. We firmly agree with Thompson [*64*] that "race, in the absence of any other qualifying or confounding variable, may not be a predictive factor for future violence."

It is also legitimate to presume the possibility of future dangerousness in a person who committed a crime in circumstances that were not in all probability conducive to a criminal act. Monahan [*15*] recently stated, "We are talking of murder, rape, robbery, assault, and other forms of violent behavior. There is a widespread social consensus, which transcends political, racial, and economic groupings, that such activities tear at the already frayed social bonds holding society together. It seems to me that when we lend professional assistance, however marginal, to improve society's control of those who will murder, rape, rob, and assault—provided that we do not let the nature of that assistance be overstated or distorted—we have nothing for which to apologize."

As to expert testimony, the statement by Gerin [*63*] still holds true: "The psychiatrist does not have to make a legal evaluation of a defendant. That pertains to the magistrate. He or she, the forensic expert, must evaluate the psychopathology of the offender and his [or her] report must be complete, objective, and logically deductive, and, from symptoms to diagnosis, must be persued above and beyond theoretical, sociological, philosophical, or psychiatric views." Gerin's approach and the previously reported statement by Monahan [*15*] find, fortunately, a great deal of support in a large stratum of unknown, but reliable, forensic psychiatrists/psychologists and jurists. Obviously, objectivity and equanimity should be maintained.

Conclusions and Suggestions

Such statements as "to predict that one is dangerous is safer . . . ," or "a person released as not dangerous can cause great harm" [*41*] summarize the quandary in which the most profound thinkers in these matters find themselves. In this regard, the psychiatrist/psychologist should be cautious not to overpredict dangerousness and should not confuse an increased risk of dangerousness with reasonable medical certainty that an individual will be dangerous. It is possible that the difficulty one encounters in assessing dangerousness is due not only to the many variables that must be assessed in order to reach an accurate prediction, but also to a climate of limited responsibility and relativism in present-day society. It is also possible that this societal trend has, at times, unconsciously influenced some experts—they, themselves, members of society—in generating reports which, although sufficiently supported by factual data, fail to express a clear opinion regarding the potential dangerousness of an individual they have examined. This may result in further doubts, in the eyes of the courts, regarding the credibility of the forensic expert's testimony, to the point of questioning the mental health professional's ability to contribute adequately in the prediction of violence. These doubts can be largely assuaged if psychiatrists and psychologists take care to substantiate their prognostications of dangerousness on the basis of the preponderance of credible scientific and clinical data available. Actually, the judicial system may tend, at times, to believe that psychiatrists/psychologists, often at variance among themselves, agree no more frequently than other health and criminal justice personnel in their assessment of dangerousness. To this effect, the institution of an appointed panel of experts—comprising an attorney, a psychiatrist or psychologist, a sociologist, and a violent crimes expert—who, together, would

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examine the supposedly dangerous individual, could probably bring about, through the sharing of responsibility, greater objectivity, better acceptance of their reports, and fewer recriminations.

The present-day social climate is disorderly and confusing and, at times, frightening. What has been thought of as the abdication by the judiciary of its responsibility in making legal decisions as to the future possible dangerousness of defendants should not also create a reluctance in the forensic psychiatrist or psychologist to participate fully in an important multidisciplinary decision. They, even though limiting their role to providing an estimate of the probability of future violent behavior, would make, in so doing, their expertise not only a source of valid professional communication but also of humane interest. The attempt to predict dangerousness is necessary in order to keep our civilized world together and our daily living as secure as possible. The possibility of identifying individuals with some increased risk of dangerousness could be enhanced if the examiners, during the joint psychiatric, psychological, and legal assessment, would take into consideration the sociological, environmental, biological, and neurophysiological factors suggested above. The examiners should be cognizant of the fact that short-term prediction of dangerous behavior, although a difficult task, can probably be made with better accuracy than long-term prediction. Indeed, as far as long-term prediction of dangerousness is concerned, we are lacking, because of obvious ethical considerations, supportive scientific studies. Furthermore, it is to be assumed that no professionally competent and ethically bound forensic psychiatrist or psychologist would ever claim a level of absolute certainty and confidence in the determination of either short- or long-term future violent behavior. However, an attempt should always be made to better our expertise and to base it on a maximum of factual data and, if available, scientific evidence. In addition, proposals should be made in the case of seriously dangerous individuals for brief periods of detention in order to further observe their behavior. Such provisions clearly would have to be made within narrowly drawn guidelines to survive constitutional scrutiny. The law in some states already provides mechanisms for short-term detention of individuals where there is merely probable cause to believe that the offender is dangerous, provided, however, that within a short, limited period of time he or she is given a full evidentiary hearing as to the need for further detention. In some states, such as Wisconsin, these mechanisms are available in both civil and criminal law. Section (§) 969.035 of the Wisconsin Statutes [*65*] provides a procedure for preventative detention in cases of murder, sexual assault, or sexual assault of a child, or if there is a history of previous violent behavior. Preventative detention of allegedly violent persons also exists in the Federal Court system [*66*]. At the same time, a negligent and indifferent attitude towards this basic social issue should be condemned and avoided. Good professional expertise, coupled with awareness of the present-day social climate and common sense, should be at the basis of simple, clear, and logical forensic reports. And, without any doubt, experts' opinions, based on and supported by factual evidence, would establish a better and more realistic communication and cooperation with the courts, supporting Franco Ferracuti's statement [*67*], "The mental health system and the criminal justice system in any given country are interlocking and complementary parts of the same deviance control apparatus within a society that is trying to cope with and care for the various and changing groups of defendants."

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DEFENSE EXHIBIT J

The Clinical Prediction of Dangerousness

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Laws committing dangerous sexual offenders indefinitely are only insofar as "dangerousness" can be predicted and treated. has relied on the clinician to identify and measure the crucial ve violent behavior and assign a probability of occurrence. Yet mc studies have concluded that not only has predictive accuracy demonstrated but also that such accuracy cannot be achieved. that any conclusion at this time is premature. There are data indi soundness of clinical as opposed to statistical prediction of d ness. Both approaches show high false positive error rates, bu provement in accuracy of clinical studies over statistical studies denied.

In examining the success of treatment, the authors present cating that a program of psychological rehabilitation can have a effect on the majority of dangerous sexual offenders.

The authors conclude that the indefinite commitment of s offenders is legitimate and appropriate, but the policy carries wit responsibilities. Enforcing such an approach means that the clini play an important role in his relationship to the court.

INDETERMINATE CIVIL COMMITMENT STATUTES

In 1958, the Massachusetts legislature enacted a statute which led to t lishment of the Center for the Diagnosis and Treatment of Sexually ous Persons. This statute provides for the indefinite civil commitmen sons who have been convicted of any one of a number of sexual offen civil commitment is in lieu of or in addition to a criminal sentence a posed on those offenders found by the court to be persons ". misconduct in sexual matters indicates a general lack of powers trol . . . sexual impulses . . . and who as a result [are] likely to attack or inflict injury on the objects of [their] uncontrolled or uncontrollable d

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1. Mass. Ann. Laws Ch. 123A § 1 (Supp. 1965).

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The judicial reasoning for such a statute, which exists not only in Massachusetts but in more than twenty other states as well, is that there are offenders whose dangerous potential would not be substantially diminished by imprisonment through criminal law. The purpose of indefinite commitment to a mental health facility is to make available psychological services within the confines of a maximum security setting.

As Paul Tappan pointed out over twenty years ago, indefinite commitment laws are morally and legally legitimate only if we can accurately determine those persons to whom such laws should apply, and only if we can treat effectively the condition for which the commitment is imposed.[2]

Our experience in implementing the Massachusetts law involved the evaluation of over 1,000 sexual offenders and the treatment of approximately 300 of those offenders. We attempted to evaluate the accuracy of our predictions and the effectiveness of our treatment. This paper reports some of our experiences and describes various issues pertaining to the clinical prediction of dangerousness: the role of the clinician in the judicial process, the problems of treatment of sexual offenders, and society's alternatives in the disposition and treatment of dangerous offenders.

DANGEROUSNESS: A MEDICO-LEGAL DIAGNOSIS

A dangerous person may be defined as having a high probability of inflicting serious bodily injury on another. Clearly, this is not a diagnosis of the person's past behavior or current state but a predictive statement of future behavior. In recent years, a series of federal court decisions have emphasized the importance of the factors involved in this predictive statement, specifically in regard to the sexual offender classified as dangerous. The courts maintain that past misconduct alone is not a sufficient basis for the label "dangerous" and does not justify indefinite incarceration. They argue that if past misconduct were the only issue, then punishment through the sanctions of criminal law would be the proper response.[3]

The courts have also held that a psychological disorder alone is not sufficient for commitment, even though the psychologically disordered individual might be in need of treatment. Only if the sexual offender is judged likely to repeat his crime, with a substantial risk of harm to the victim, is indefinite commitment as a form of preventive detention permissible. The court's determination has depended, in such cases, largely on the professional opinion of the clinician, most often a psychiatrist.

If we assume that the clinical process has something to contribute to determining dangerousness, we must ask what the clinician or behavioral scientist

2. Paul W. Tappan, "Some Myths about the Sex Offender," *Federal Probation*, June 1955, pp. 7–11.

3. See, for example, Millard v. Harris, 406 F. 2d 964 (1968).

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knows about certain factors related to the violent act: the nature of the aggressive impulse; the stimuli which elicit aggressive behavior; the release or discharge factors in such behavior; the management of appropriate, as opposed to violent, aggression; and the interrelation of other motivational factors with aggression. To determine precisely the probability of a violent act, one must understand these and still other factors. However, the knowledge required to make such a prediction simply does not exist at present.

SYSTEMATIC STUDY OF CLINICAL PREDICTION

During the past decade, the ability of the clinician to predict dangerousness has been seriously questioned by social scientists, judges, lawyers, and the clinicians themselves.[4] Their inquiry has been systematic, vehement, at times even irrational. Critical studies generally conclude that neither statistical nor clinical prediction of dangerousness has been demonstrated. Further, some have decided that not only has predictive accuracy not been demonstrated but also that such accuracy cannot possibly be achieved.

We argue, however, that any conclusion is premature at this point. There are, in fact, some data to indicate the soundness of the clinical prediction of dangerousness, and we see no comparable alternative to clinical evaluation.

CLINICAL EVALUATION PROCEDURE

In evaluating an offender, the clinician bases his or her prediction on an extended period of study, makes use of a variety of professional personnel, and

4. See, for example, the following American studies: G. H. Morris, "Criminality and the Right to Treatment," *University of Chicago Law Review*, vol. 36 (1969), pp. 784ff.; D. L. Bazelon, "Introduction," in *The Right to Treatment: A Symposium*, Donald S. Burris, ed. (New York: Springer, 1969); A. M. Dershowitz, "The Law of Dangerousness: Some Fictions about Predictions," *Journal of Legal Education*, vol. 23, no. 1 (1971), pp. 24–47; Seymour L. Halleck, *Psychiatry and the Dilemmas of Crime—A Study of Causes, Punishment and Treatment* (New York: Harper and Row, 1967); Thomas S. Szasz, *Law, Liberty, and Psychiatry* (New York: Macmillan, 1963); H. J. Steadman, "Some Evidence on the Inadequacy of the Concept and Determination of Dangerousness in Law and Psychiatry," *Journal of Psychiatry and Law*, Winter 1973, pp. 409–61; J. Monahan, "The Prevention of Violence," in *Community Mental Health and the Criminal Justice System*, J. Monahan, ed. (New York: Pergamon, 1976); E. Megargee, "The Prediction of Violence with Psychological Tests," in *The Control of Aggression and Violence: Cognitive and Physiological Factors*, Jerome L. Singer, ed. (New York: Academic Press, 1971); Ernst A. Wenk, James O. Robison, and Gerald W. Smith, "Can Violence Be Predicted?" *Crime and Delinquency*, October 1972, pp. 393–402; B. J. Ennis, "Civil Liberties and Mental Illness," *Criminal Law Bulletin*, March 1971, pp. 101–27; Nicholas N. Kittrie, *The Right to Be Different: Deviance and Enforced Therapy* (Baltimore, Md.: Johns Hopkins Press, 1971); and B. Rubin, "The Prediction of Dangerousness in Mentally Ill Criminals," *Archives of General Psychiatry*, September 1972, pp. 397–407. Reports from abroad include: (The Netherlands) H. Roosenburg, "Discussant"; (Denmark) Georg K. Sturup, "Will This Man Be Dangerous?" and (England) P. G. McGrath, "Custody and Release of Dangerous Offenders," in *The Mentally Abnormal Offender*, A. V. S. deReuck and R. Portes, eds. (Boston: Little, Brown, 1968).

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consults diverse clinical, behavioral, and social sources of data. Typically, this involves a minimum of a sixty-day study period. The clinician examines the offender's emotional, behavioral, and psychological development through a detailed study of his social, sexual, educational, and vocational history; his medical and psychological records; and his history of criminality. Sources for these data are clinical interviews, psychological tests, official records and transcripts, family interviews, behavioral reports of the offender's adjustment during the observation period, field investigations, and, when relevant, interviews with the victim. Only after completing this process is a predictive decision made.

It is important to note that we refer only to a *convicted* offender, someone who has already committed at least one dangerous act. The clinician must view this act in terms of the offender's developmental history, the social-environmental context of this development, the environmental context of the offense, the current psychological and emotional life of the offender, and the social-environmental features of the world the offender would reenter if not committed. The clinician must then ask himself several questions. How probable is it that this person will exhibit behaviors physically harmful to another? Under what environmental conditions are these behaviors most likely to occur? What is the likelihood that these environmental conditions will prevail? Internal factors—motivation, attitudes, values—and external factors—early family experiences and social development, current life stresses—become crucial.

History has shown that persons who have lived moral and ethical lives may, under certain circumstances such as war, exhibit violent and primitive behavior; in countries where there is political, social, and economic turmoil, acts of violence increase; in certain parts of society where life stresses are high and personal gratifications low, there is a relatively high incidence of violence. Marvin Wolfgang and Franco Ferracuti have demonstrated the existence of subcultures of violence which may be attributed, at least in part, to the breakdown of the family, to widespread social and economic decay, and to pervasive asocial or antisocial values and attitudes.[5]

However, there are also persons involved in a life-long history of violent behavior whose environment has been benign and who have suffered no apparent stresses on survival nor any special precipitating events. Here, the factors relating to the violence appear to be internal. Here, the motivational life of the offender—regardless of social, political, and economic factors—is crucial.

CLINICAL CASE STUDY

The authors studied a young man who had been convicted of a very brutal sexual assault on a teenage girl. It was apparent to us and to him that the

5. Marvin E. Wolfgang and Franco Ferracuti, *The Subculture of Violence—Towards an Integrated Theory in Criminology*, tr. from the Italian (London: Tavistock Publications, 1967).

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degree of aggression and violence were far beyond what had been necessary to force her to submit sexually; in fact, the rape itself was not essentially a sexual act but an act of violence. This offender came from a stable, middle-class family. Although he had never been convicted previously for a criminal act, he did have a history of difficulty with women marked frequently by physical assault. He viewed women as either saints or sinners and could become involved only with the sinners—those who were promiscuous and felt no commitment to a relationship. When left by these women, as he was each time, his reactions varied: Sometimes he would simply seek out someone else; at other times, however, he would become irritated by other women and would quarrel with them at work, while driving, or in bars.

The pattern in this man's character was clear: He saw the majority of women as whores; he established relationships that were doomed to fail; and he displaced his felt anger onto other women. On the day of his vicious assault, he saw a girl, whom he had worshipped from a distance as a "saint," necking with a boy on her front porch. A short time later, he followed another young girl as she walked home, then he kidnapped, assaulted, and raped her.

It seemed apparent that unless something intervened in this destructive pattern of life, an even more serious assault or a murder might occur. The young man met one set of our criteria of sexual dangerousness: basic feelings of anger toward women, a relative lack of control over the acting out of such feelings, and a tendency to place himself in situations where such feelings were activated. Rather than imposing the standard five-to-ten-year criminal sentence, the court committed the offender, upon our recommendation, to the Treatment Center for an indeterminate sentence of one day to life. After two and one-half years of in-patient treatment he was released and continued in out-patient treatment. Although he experienced some difficulties following release, he has now made a successful adjustment and has lived for over ten years in the community. Two clinical evaluations were made regarding this offender: He was judged "dangerous" at the time of commitment, and "non-dangerous" at the time of release.

PREDICTION STUDIES: A CRITIQUE

These preliminary considerations are essential to understand the focus of the following observations and comments on the predictive studies.

1. The first major criticism concerns the sample of persons for whom the prediction is made. In Henry Steadman's preliminary study for the "Baxstrom" research, he notes that 42 percent of the men evaluated as "dangerous" had never committed a known violent act.[6] Ernst Wenk, James Robison, and Gerald Smith studied subgroups of men who had committed

6. H. J. Steadman, "Follow-up on Baxstrom Patients' Return to Hospitals for the Criminally Insane," *American Journal of Psychiatry*, March 1973, pp. 317–19.

violent acts, but it is not clear whether these were the same subgroups for whom someone would have predicted future violence.[7]

Our own experience in prediction, which we will report later in this paper, is based on a sample of persons who already have a conviction for *at least* one sexual assault. In fact, 73 percent of those committed to the Massachusetts Treatment Center had two or more convictions for sexual offenses before our predictions were made. Past conduct alone is not a sufficient predictor of future behavior: 60 percent of those whom we predicted to be *not* dangerous also had two or more convictions. However, to predict an act that has never occurred in an individual's history is an unwarranted test of clinical prediction. Yet many of the negative statistical studies in the literature are based on just such a test.

The Massachusetts statute regarding dangerous sexual offenders requires at least one conviction before commitment. Other comparable state statutes have no such requirement. The position that dangerousness cannot and should not be predicted when there has been no prior dangerous act has our complete support.

2. The second issue in question is the interval between the time of prediction and the time when the individual may be released in the community. Two problems must be considered: First, where does the offender reside during the interval—in a hospital, in a prison, or in some other controlled and structured setting? And second, if he is returned to the community, have significant internal changes or changes within the community environment occurred so that a prediction may well be revised? Our data from the Treatment Center demonstrate that recidivism rates for released patients are significantly related to the amount of postrelease support and control maintained for each released patient.

Wenk, Robison, and Smith reported a fifteen-month follow-up of offenders. This is a considerable period, but it is unclear whether the follow-up brought the releasees to the end of their parole supervision period. An earlier study by Leon Shapiro, Murray Cohen, and William Budgen found that many parolees did not participate in crime while under parole supervision, but they began to get into difficulty when their parole period ended.[8]

3. Clearly, the accuracy of predictive equations is contingent on the predictors' relevancy to the criterion. Predictor variables in the clinical studies have shown a woeful lack of specification, and relevancy in the statistical studies has too often been open to serious question. How many statistical studies include the environmental variable contained in the reentry situation? Clinical data show clearly that a person evaluated as high risk based on prerelease data may well be a false positive error if environmental factors are not included in

7. Wenk et al., "Can Violence Be Predicted?"

8. Leon N. Shapiro, Murray Cohen, and William Bugden, "Parole Violation and the Early Development of Internal Controls," *Archives of Criminal Psychodynamics*, Spring 1959, pp. 554–59.

the prediction. If the released offender enters a stable, supportive home in a concerned community, and undertakes a self-selected job that provides financial support and personal gratification, his high risk evaluation may be inaccurate.

4. In the study by Wenk, Robison, and Smith, it appears that the research personnel extracted various clinical data from each offender's history and inserted them into a statistical equation to generate a prediction. Clinical data are no different from other kinds of data. Their meaning is lost when taken out of context.

5. Both Steadman's "Baxstrom" report and a study by McGarry[9] presented data on criminal arrests for persons released by court order who had previously been confined in mental hospitals. Two flaws are readily apparent. First, release decisions were not clinical predictions at all but were based purely on technical legal considerations. Second, these patients had been committed on grounds of incompetence or criminal insanity, commitments which are only indirectly and implicitly based on a prediction of dangerousness.

That clinicians have not yet developed expertise in regard to behavioral prediction is, in our opinion, true. That dangerousness cannot be predicted by professionals trained only in diagnosis and treatment—not in prediction—is a conclusion that simply confuses a difficult enough problem. Clinical prediction of dangerousness is possible. Two important studies show findings significantly different from those in the statistical reports. Both generate their predictions from extensive clinical material, and in both cases the predictions themselves are made by clinicians. These studies have received widespread attention; we will discuss their findings briefly.

CLINICAL PREDICTION STUDIES

In 1972, Kozol, Boucher, and Garofalo reported on a study conducted by (but not credited to) Cohen, Petrelli, and Boucher on 335 sexual offenders, a sample of the total group sent for diagnostic evaluation under the Massachusetts law.[10] Of this sample, 304 were found not to be sexually dangerous and were so recommended to the court. They were given either probation or a criminal sentence. The remaining 31 men were found by the clinical staff to be sexually dangerous, but the court did not accept the recommendation; instead of incarcerating the offenders under a civil commitment, the court disposed of the cases by criminal law procedures. All these offenders were then followed up for a five-year period, beginning with their release to the community. Of the former group, those found to be nondangerous, 8.6 percent committed a new

9. A. Louis McGarry, "The Fate of Psychotic Offenders Returned for Trial," *American Journal of Psychiatry*, March 1971, pp. 1181–84.

10. H. L. Kozol, R. J. Boucher, and R. F. Garofalo, "The Diagnosis and Treatment of Dangerousness," *Crime and Delinquency*, October 1972, pp. 371–92.

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sexual offense. Of the latter group, those diagnosed as dangerous, 38.7 percent committed a new sexual offense.

A similar study by Hodges, based on the Patuxent Center in Maryland, followed up 447 "defective delinquent" (dangerous) offenders for three years.[11] Hodges found that 81 percent of those recommended by the clinical staff for incarceration who were not incarcerated by the court (the "untreated" group) committed another offense, although this was not necessarily a violent crime. Of those committed to the Patuxent Center but later released against staff recommendation (the "partially treated" group), 71 percent committed a new crime. Only 37 percent of those committed and later released on the staff's recommendation (the "fully treated" group) were arrested for a new crime.

These studies predicted not only dangerousness but also nondangerousness; the total accuracy of prediction was 88 percent in the Massachusetts Treatment Center study and 60 percent in the Patuxent study.

What is most important about these findings, however, is not the specific values of the error rate. Rather, these are the only two studies which could truly be called clinical-predictive, and they show considerable improvement over the statistical studies in both false positive and false negative error rates. The two studies demonstrate, we believe, that a conclusion about our capability of predicting dangerousness is premature.

Prediction is but one question raised in discussions of preventive detention. A second question pertains to the psychological treatment program, such as that at the Massachusetts Treatment Center. Is treatment ineffective, since the violent offender is untreatable, or is it unnecessary, since the rehabilitative services of a progressive prison system are more than adequate?

TREATABILITY OF DANGEROUS SEX OFFENDERS

The authors conclude, after nearly twenty years of experience, that about 15 percent of dangerous sexual offenders do not appear responsive to *any* treatment procedures currently available. Treatment for another, somewhat larger, group—about 20 to 25 percent—has a modest effect; it reduces dangerousness but does not alter significantly a maladaptive lifestyle. For the remainder of offenders—over 60 percent—a total treatment effort of individual and group psychotherapy, socialization experiences, occupational and recreational therapy, prerelease planning and postrelease treatment and supportive care has a profound effect on their lives and on successful societal adaptation.

Petrelli collected data which show partial support of these conclusions.[12]

11. Emory F. Hodges, "Crime Prevention by the Indeterminate Sentence Law," *American Journal of Psychiatry*, September 1971, pp. 291–95.

12. Personal communication, 1975.

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From 1958 to 1974, 160 offenders were treated and released from the Massachusetts Treatment Center. Of this group, 131 were released on the recommendation of the clinical staff and 29 were released by judicial process, before the staff felt that treatment was completed. The follow-up periods were, of course, different, ranging from seven months to fourteen years. Of the group that completed treatment, 14 percent committed a new violent offense; 31 percent of the incompleted-treatment group committed a new violent offense. If we compare these figures with the study in which 38.7 percent of those not incarcerated but evaluated as dangerous committed a new offense, we see that dangerousness may be reduced by treatment. Dangerousness has been reduced by over 24 percent for the recommended group and by over 7 percent for the nonrecommended group.

These data test not only the effectiveness of treatment but also the reevaluation of men previously considered dangerous.

CLINICAL CRITERIA FOR DIAGNOSING DANGEROUSNESS

Admittedly, there is no scientifically confirmed set of predictor variables, nor do we have precise techniques for evaluating change. However, certain important factors enter into our consideration of commitment and subsequent release. The offender described earlier showed the following characteristics:

1. He was convicted for an explosive, violent sexual assault.
2. He had a history of difficulties with women.
3. He overidealized some women and experienced a fear of, and contempt for, others. The psychological pain produced by an experience with an idealized woman resulted in feelings of anger being displaced onto other women.
4. He displayed a supernormal posture of self-confidence, thinly veiling a sense of worthlessness, inadequacy, and helplessness. Aggression served as a means of reestablishing a sense of well-being; thus, aggressive behavior was high on the response hierarchy and there was little ability to control its expression.
5. He did not perceive his active role in putting himself in situations with women which could have no consequence other than his feeling used and hurt. His experience was that he was a helpless victim.
6. He had no real, intimate attachments to either men or women; as part of this isolation, the emotional qualities of compassion, love, warmth, empathy, and trust were noticeably absent.
7. His general mood was dysphoric, characterized by a dull depression; at times, the depression would become acute and lead to a sense of panic and overwhelming feelings of hopelessness. Once again, aggression was his characteristic way of fending off the distress of depression.

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8. He was a steady and good worker, but he refused to accept a promotion with its attendant increase in responsibility. Although errors or mistakes at work caused him great discomfort, he received no particular pleasure from good work or accomplishments.

9. In general, his perception, attention, reasoning, and judgment were relatively intact, but serious impairment in these basic perceptual-cognitive functions would occur under stress.

With the exception of this offender's difficulties with women, he exhibited no other criminal or antisocial behavior. Sexual offenders may share many characteristics of other social offenders, but the differences between these offenders are significant. The man who sexually molests a child and the man who sexually assaults or sadistically murders a woman are psychologically disordered persons; their acts are best understood as equivalent to symptoms. Social, cultural, economic, and political factors are far less important than in the case of the nonsexual social offender.

Indefinite commitment of sexual offenders, based on an evaluation of dangerousness and requiring treatment, is legitimate and appropriate, yet such a policy imposes a heavy responsibility on clinicians, judges, lawyers, correctional personnel, and legislators. Individuals committed under these statutes are faced with the possibility of lifetime confinement.

THE ROLE OF THE CLINICIAN IN THE CRIMINAL JUSTICE SYSTEM

Under the sexual psychopath statutes, the clinician functions as an expert whose role is to advise the court about a person's potential for sexual violence. In fulfilling this responsibility, the clinician is bound by certain requirements of law.

The first requirement is that any prediction of dangerousness must be based on a substantial and demonstrable likelihood of future sexual misconduct. The clinician must clearly articulate the predictive factors.

Second, the courts have interpreted the sexual psychopath statutes as applying only to those whose future sexual misconduct entails a significant risk of truly dangerous behavior, posing a threat of serious injury to the victim. It is not the court's or the clinician's function to eliminate from society all sexual deviants. Only the potential for sexual violence justifies extreme action.

Third, in defining the task of the clinician as expert witness, the courts have held that the clinician must submit not only his informed opinion but the basis for that opinion as well.

Fourth, the ultimate determination of dangerousness is made by the court, not the clinician, and to make this determination the court must have access to all pertinent information. Monahan, in testimony before the California

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Assembly, called attention to the fact that courts too often simply rubber stamp the opinion of the psychiatrist or the psychologist.[13] Such rubber-stamping occurs when the clinician assumes too much responsibility and the court too little. But it is with the judiciary and the legislature that responsibility must rest.

Fifth, in discharging this responsibility, the psychiatrist is not the only expert consulted; the courts must be open to a wide range of data presented by other behavioral scientists as well.

Sixth, there must be a constant and intensive effort devoted to the treatment of patients committed under sexual psychopath statutes. In recent years the courts have begun to rule that treatment is the *quid pro quo* of involuntary commitment, and that the absence of treatment would render commitment punitive to an excessive degree and therefore unconstitutional. Furthermore, the Supreme Court has recently argued that where adequacy of treatment is involved, the issue becomes subject to court review and thus is no longer the private domain of the clinicians.[14] The courts have already acted in several cases to establish and enforce standards for psychiatric treatment.[15]

Seventh, every procedural safeguard must be included to ensure that the individual's rights are respected. As clinicians, we aim to heal the pain and suffering of our patients. However, we must also realize that these patients may view their commitment as punishment, differing from imprisonment only in that the patients are denied certain knowledge of when—or even if—they will be released.

A number of our patients sought commitment because they felt themselves to be in need of treatment. Others accepted commitment because of their fear of prison and the sex offenders' status in the social hierarchy. Nevertheless, most patients were committed involuntarily; the number of legal challenges brought by these individuals indicates that many may feel less than grateful for our efforts to help them. All too often in the past, commitment laws have been abused by the wholesale confinement of large numbers of social undesirables. To avoid such abuse, certain safeguards must be guaranteed the individual: He must be given a full and impartial hearing to decide on his commitment; he should be presumed not dangerous unless proved otherwise; his status and the adequacy of his treatment should be periodically reviewed by outside agents of the court; and he must be confined only in a facility that meets reasonable standards of decency and human dignity.

Eighth, psychotherapy is obviously only one procedure for change. Clinical, social, and rehabilitative services must be available. Institution-

13. Monahan, "The Prevention of Violence."
14. O'Connor v. Donaldson, 95 S.Ct.2486 (1975).
15. See, for example, Wyatt v. Stickney, 344 F. Supp. 373 (1972).

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alization typically brings experiences and attitudes that are counter-nductive to healthy change, such as loss of dignity, dependency, forced apliance, apathy, and cynicism. Mental health and correctional personnel must work as a treatment team to overcome these negative factors.

It is a perilous, narrow path between the requirements of social order and the expression of individual freedom. To balance order and liberty properly is a sociopolitical, not a clinical, issue, and this must be done by society's courts and legislatures. The clinician should neither be given nor attempt to usurp society's right to determine the risks it is willing to take in resolving the conflict between safety and liberty.

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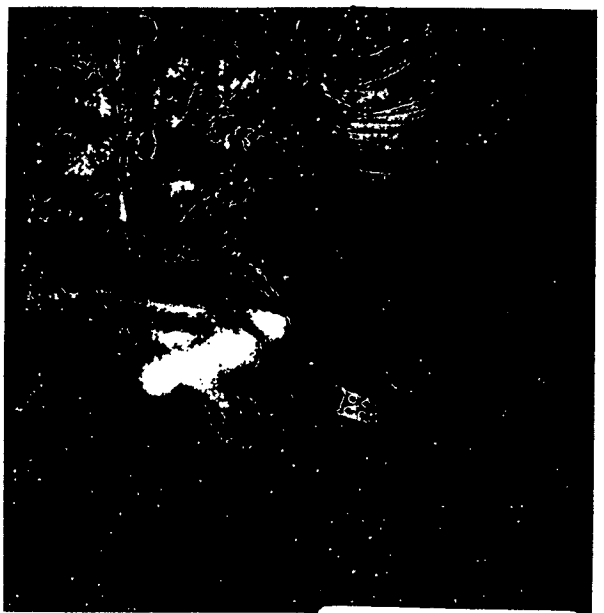

DEFENDANT'S EXHIBIT
PENGAD-Bayonne, N. J.

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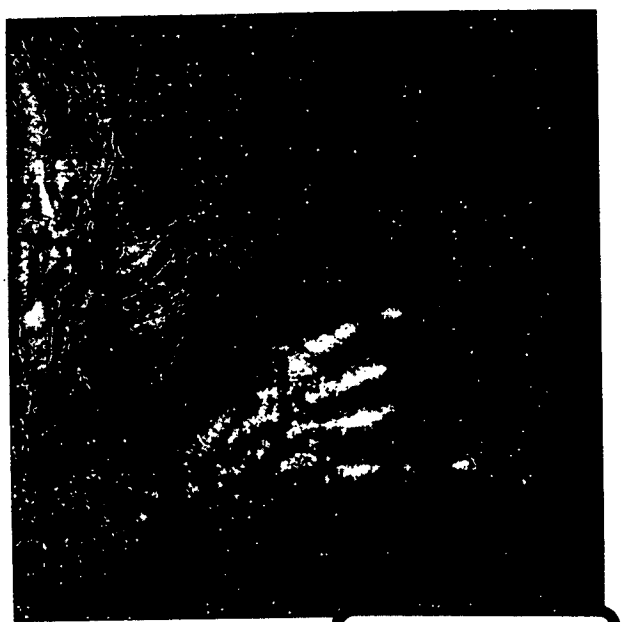

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2
PENGAD-Bayonne, N. J.

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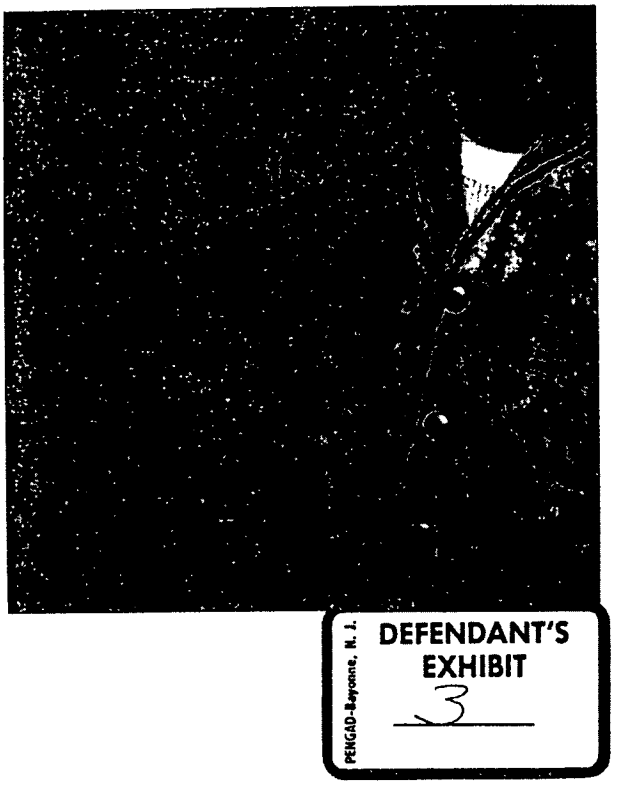

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DEFENDANT'S EXHIBIT
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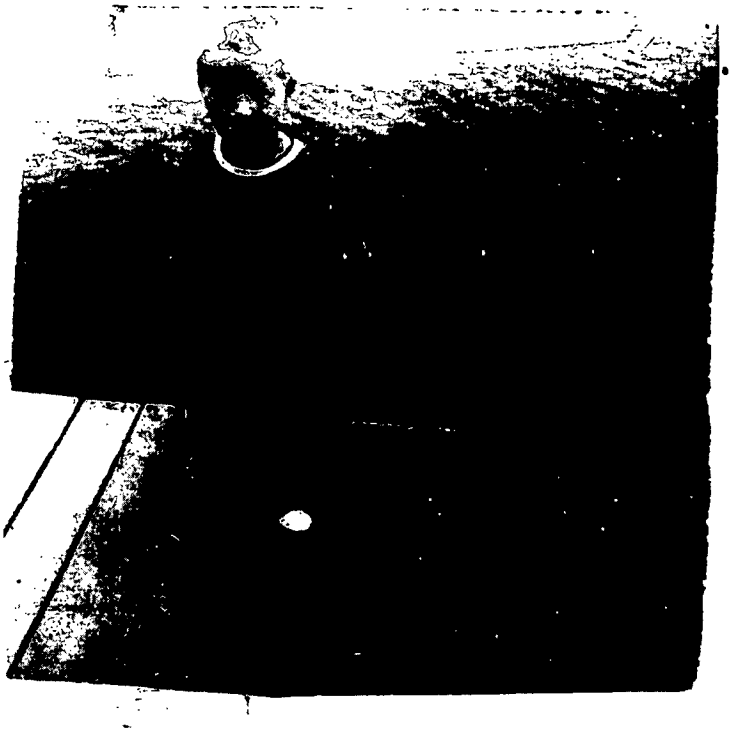

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DEFENSE EXHIBIT 7

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2

DEFENSE EXHIBIT 8

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DEFENSE EXHIBIT 9

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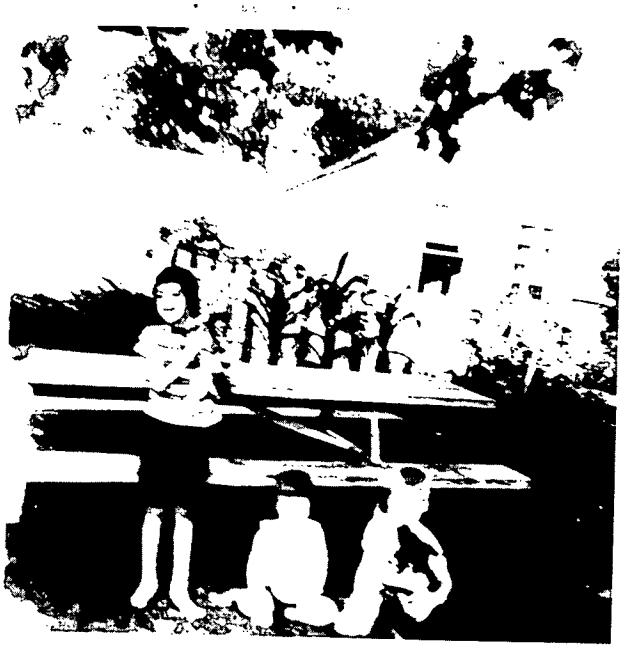
DEFENSE EXHIBIT 10



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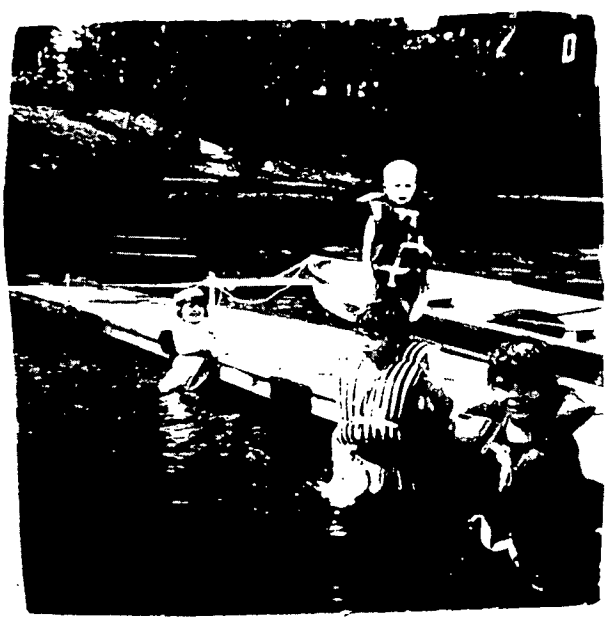

P-11

DEFENSE EXHIBIT 12

E-12

DEFENSE EXHIBIT 13

P-13

DEFENSE EXHIBIT 14

C-14

DEFENSE EXHIBIT 15

P-15

DEFENSE EXHIBIT 16

E-16

DEFENSE EXHIBIT 29

PATIENT'S NAME: **RHOADES, RICK ALLAN** DATE: 09-15-92

AGE: 28 YEARS DOCTOR: DR. ALAN C. TAYLOR

QUANTITATIVE EEG:

SUMMARY OF RESULTS:

I. CONVENTIONAL EEG: is within the range of normal variation.

II. QEEG: The quantitative (computerized) EEG showed a total power asymmetry between temporal leads, activity appearing higher in voltage on the right side. This is particularly marked in anterior temporal leads.

The patient's EEG data were subjected to neurometric analysis with discriminant functions.

Discriminant functions provide a quantitative estimate of the similarity between a patient's profile and characteristic patterns found during extensive research on groups of patients with various disorders.

This classification is a multivariate statistical summary of a neurometric evaluation and serves only as an adjunct to other clinical evaluations.

The patient's discriminant scores suggested the presence of a major affective disorder ($P < 0.10$) of the bipolar subtype ($P < 0.10$).

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Evoked responses were also obtained on this patient. These included:

I. Pattern Visual Evoked Responses: borderline normal on right side, abnormal on left side because of delay in P100 response.

II. Upper Somatosensory Evoked Potentials: normal.

III. Lower Somatosensory Evoked Potentials: normal.

IV. Auditory Brainstem Responses: normal.

V. Long Latency Cognitive Evoked Auditory Responses (P300): normal.

A complete technical summary underlying these results with samples of neurophysiologic data is included within this portfolio.

TECHNICAL DESCRIPTION AND FINDINGS:

I. CONVENTIONAL EEG

TECHNICAL SUMMARY: This 21-channel recording is of satisfactory technical quality. There is EKG and electrical artifact which arises intermittently during the recording. Posterior dominant 9-10Hz alpha activity, of persistent quantity, rhythmic character, of 40-60uv amplitude when recorded with reference to the ipsilateral ear. This is slightly higher in voltage on the right side, particularly in anterior leads. Generalized 6-7Hz activity of 10-20uv amplitude when recorded with reference to the ipsilateral ear in anterior leads.

Hyperventilation was not performed.

RESULTS: Findings are within the range of normal variation.

II. QUANTITATIVE EEG (QEEG)

A 20-minute recording was performed on a Cadwell Spectrum 32 Quantitative Electroencephalogram. All electrodes of the International 10-20 System were used and in addition electrodes FPZ, OZ and one eye lead which was placed laterally and inferiorly to the right eye. All electrodes were referred to linked ears (A1 + A2). The sensitivity setting as 7uv per millimeter. The high frequency filter was set at 70Hz and the low frequency at 0.53Hz. 60Hz notch filters were also employed. A 50uv square wave calibration signal was generated and recorded. Furthermore, biocalibration employing an FZ-PZ derivation in all channels was recorded prior to and after the test. The patient was recorded with eyes closed, awake and alert but relaxed. Data was recorded on an optical laser disk. Automatic artifact rejection algorithms were employed as well as visual inspection by a board certified EEG

technologist and physician. The tracing was also written on paper for more thorough visual inspection. Following data collection epoch selection was performed offline. A minimum of 24 epochs of 2.5 seconds each and a maximum of 48 epochs of similar duration were obtained for analysis. Both monopolar and bipolar derivations were selected for analysis.

RESULTS: shows a total power asymmetry between temporal leads, particularly anteriorly (Z total power asymmetry F7T3 vs F8T4 = -3.10). This gives rise to a total power asymmetry in anterior leads in multivariate Z scores measures (Z total power asymmetry anterior = 2.08) and an overall anterior abnormality Z score = 2.31.

The patient's EEG data were subjected to neurometric analysis with discriminant functions and his discriminant scores suggested the presence of a major affective disorder ($P < 0.10$) of the bipolar subtype ($P < 0.10$).

The features making the highest contribution to the discriminant decisions were:

Major Affective Disorder Statement:
- Bipolar Coherence Combined Anterior
- Bipolar Asymmetry Combined Anterior

Bipolar Statement:
- Bipolar Relative Alpha T4/T6
- Bipolar Asymmetry Total T3F7/T4F8
- Monopolar Relative Beta Fz.

Preliminary studies by Dr. Stephen Suffin in collaboration with Cadwell Laboratories suggest that patients showing this neurometric profile respond best to a medication regimen of Amitriptyline and Lithium.

III. PATTERN EVOKED VISUAL POTENTIAL (PRVEP)

Recordings were obtained on a 21-channel montage with linked ear references. Sensitivity was 10uv per division. The high frequency filter was set at 70Hz and the low frequency filter was at 1.0Hz. Visual stimuli were presented by a light emitting diode (LED) checkerboard with red and black alternating at a repetition rate of 2.11 pattern reversals per second. The LED was held approximately 18 inches from the patient's eyes. It consisted of 36 1/2 inch squares; both monocular and binocular stimulations were performed. Approximately 150 flashes were averaged.

RESULTS: P100 OS = 102.1 ms; P100 OD = 113.5 ms. Responses from the right eye is abnormal because of delay in the P100 response. This could be due to diminished visual acuity in the right eye or to other types of retinal or optic nerve pathology.

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IV. UPPER SOMATOSENSORY EVOKED POTENTIALS (SSEP)

Recordings were obtained on a 21-channel montage with linked ear references. The amplitude setting was at 10uv per division. The high frequency cutoff was at 1000Hz; the low frequency cutoff was at 10Hz. The median nerve was stimulated bilaterally at intensities adjusted for the patient to maximum toleration approaching the discomfort level (approximately 6 to 12mA). These stimuli were repeated at a rate of 2.11 per second and their duration was approximately 100 microseconds. The sweep speed of the oscilloscope was approximately 5 ms per division giving a 50 ms window.

RESULTS: Left Erb's = 10.3 ms; 14.7 ms; N19 = 20.6 ms; P22 = 22.6 ms; right Erb's = 10.4 ms; N13 = 14.8 ms; N19 = 20.3 ms; P22 = 22.5 ms.

V. LOWER SOMATOSENSORY EVOKED POTENTIALS (LSSEP):

Recordings were obtained on a 21-channel montage with linked ear references. The amplitude setting as at 20uv per division. The high frequency cutoff was at 500Hz. The low frequency cutoff was at 10Hz. The posterior tibial nerve was stimulated bilaterally at intensities adjusted for the patient to maximum toleration approaching and at times exceeding the discomfort level (approximately 30-40 mA). These stimuli were repeated at a rate of 2.11 per second and the duration was approximately 100 ms. The sweep speed of the oscilloscope was approximately 5 ms per division, giving a 100 ms window.

RESULTS: NP37 left = 38.9 ms; right = 40.7 ms. The patient is approximately 5'7" tall.

VI. AUDITORY BRAINSTEM RESPONSE (ABR)

Recordings were obtained using a 2-channel display consisting of CZ-A1 and CZ-A2. Sensitivity was 10uv per division. The high frequency filter was at 3000Hz. The low frequency filter was at 100Hz. Stimuli were applied in the condensation phase at a rate of approximately 11.1 per second and 100 microsecond duration. The intensity was 70 decibels above auditory threshold. This was applied either to the left or right ear. White noise was applied simultaneously to the contralateral ear at an intensity of 30 decibels. The sweep speed was approximately 1 ms per division, giving a 10 ms time window. Automatic artifact rejection was used. Two trials were performed for each ear.

RESULTS: within the range of normal variation (see sample).

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VII. LONG LATENCY COGNITIVE EVOKED AUDITORY RESPONSES (P300).

A 21-channel recording was obtained using linked ear montage. The sensitivity was set at 2uv per division. The high frequency filter was 70Hz; the low frequency filter was at 1.0Hz. Both common and rare auditory stimuli were applied. The common stimulus was at 500Hz frequency. The pseudorandom (oddball) stimulus was at approximately 800Hz. Stimuli were presented binaurally. The stimuli had an intensity of 70 decibels, a rise time of 5 ms, a plateau of 10 ms and a fall time of 5 ms. The repetition rate was 0.97 per second.

RESULTS: within the range of normal variation (see sample).

Meyer L. Proler, M. D.

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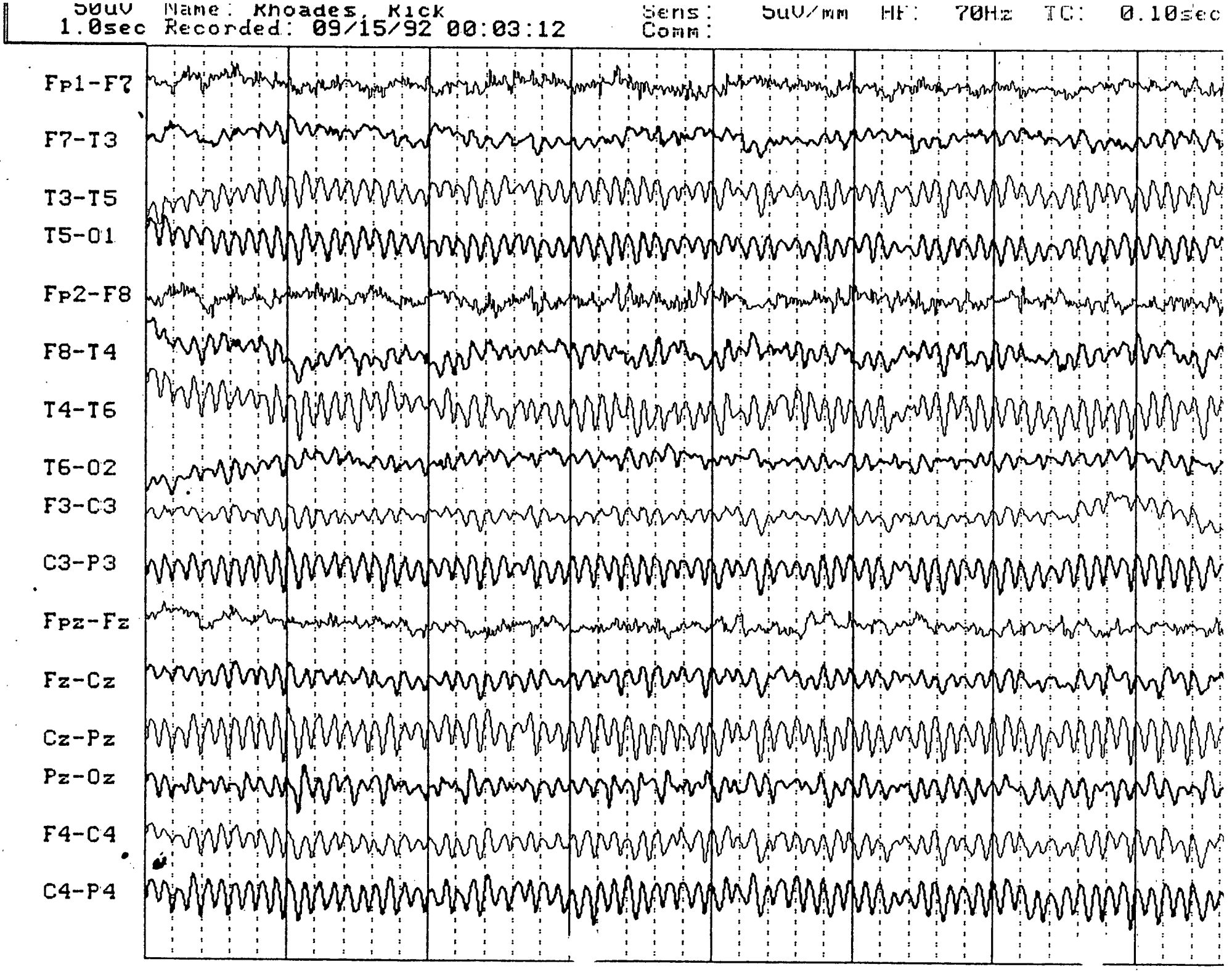

UNIVERSITY NEURO-DIAGNOSTICS
5615 KIRBY # 650
HOUSTON, TX 77005

Name: Rhoades, Rick
ID:
Date of Birth: 05/10/64

Test Date: 09/16/92
Test #: 1
Sex: m

Physician: Bromberg

Technician: JSZ

Neurometric Discriminants

Discriminant functions provide a quantitative estimate of the similarity between a patient's profile and characteristic patterns found during extensive research on groups of patients with various disorders.

This classification is a multivariate statistical summary of a neurometric evaluation and serves only as an adjunct to other clinical evaluations.

This patient's discriminant scores suggest the presence of a Major Affective Disorder ($p \leq 0.10$) of the BIPOLAR subtype. ($p \leq 0.10$)

The features making the highest contribution to the discriminant decisions are:

Major Affective Disorder Statement:
- Bipolar Coherence Combined Anterior
- Bipolar Asymmetry Combined Anterior

Bipolar Statement:
- Bipolar Relative Alpha T4/T6
- Bipolar Asymmetry Total T3F7/T4F8
- Monopolar Relative Beta Fz

UNIVERSITY NEURO-DIAGNOSTICS
5615 KIRBY # 650
HOUSTON, TX 77005

Patient Clinical Record

Name: Rhoades, Rick
ID:
Test #: 1

Test Date: 09/15/92
Today's Date: 09/16/92
Date of Birth: 05/10/64 Sex: m

Physician: Bromberg
Montage: ae

Technician: JSZ

Medications: none

Reason for test: organic brain disorder

Impressions:

UNIVERSITY NEURO-DIAGNOSTICS
5615 KIRBY # 650
HOUSTON, TX 77005

Name: Rhoades, Rick
ID:
Date of Birth: 05/10/64

Test Date: 09/16/92
Test #: 1
Sex: m

Physician: Bromberg

Technician: JSZ

Neurometric Discriminants

Discriminant functions provide a quantitative estimate of the similarity between a patient's profile and characteristic patterns found during extensive research on groups of patients with various disorders.

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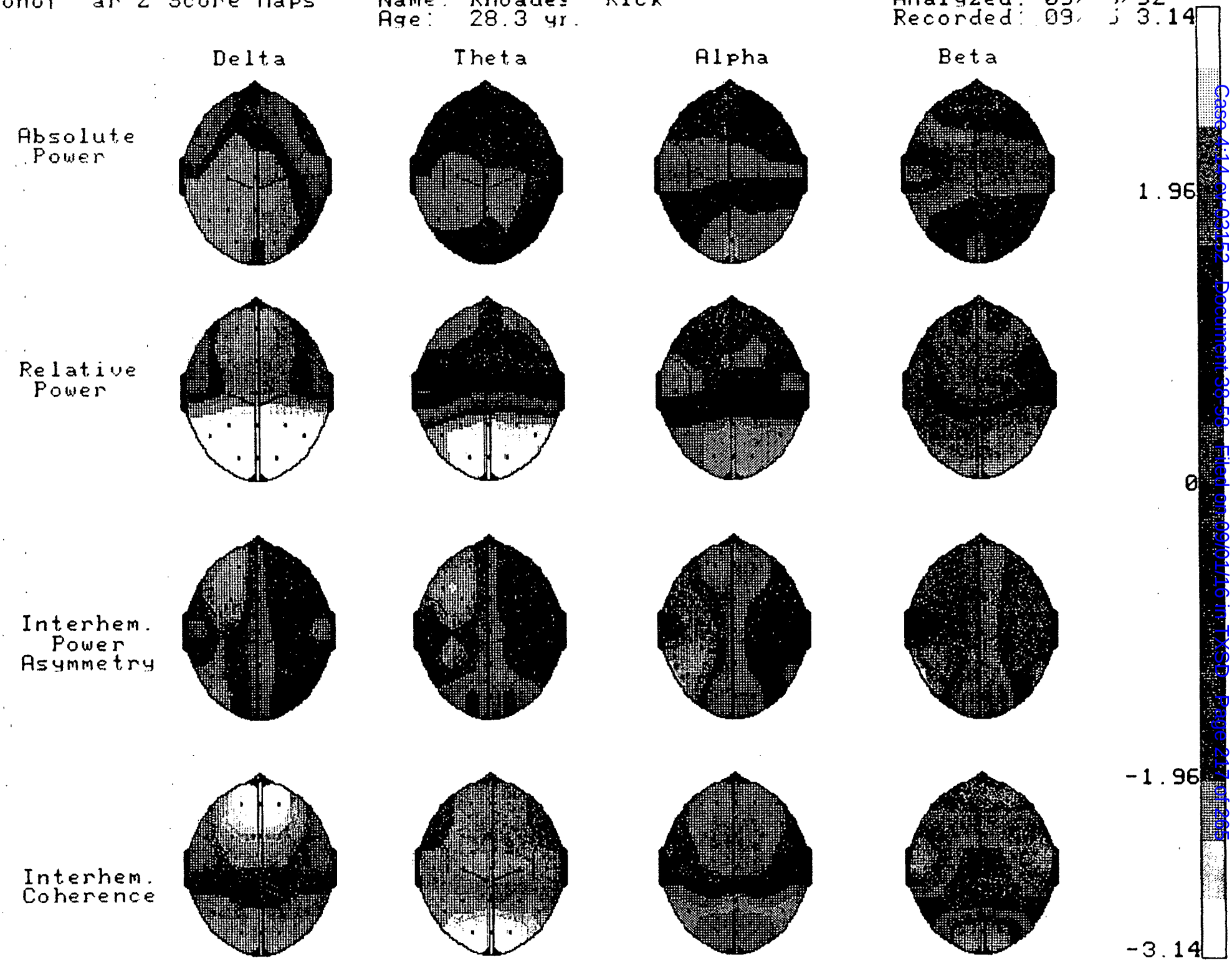
- Bipolar Relative Alpha T4/T6
- Bipolar Asymmetry Total T3F7/T4F8
- Monopolar Relative Beta Fz

Monor ar Z Score Maps

Name: Rhoades Rick
Age: 28.3 yr.

Analyzed: 09/ 3/92
Recorded: 09/ 3.14



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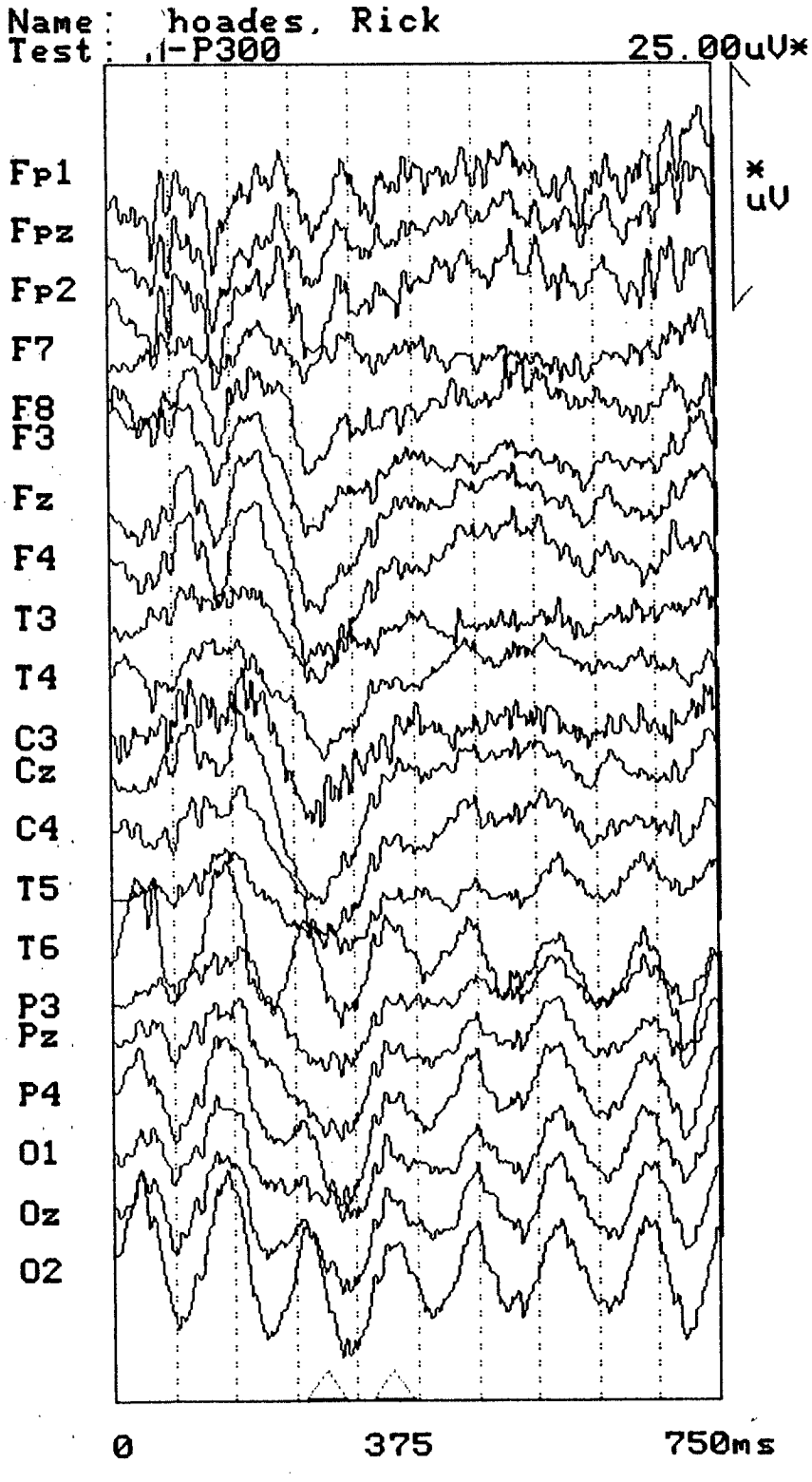

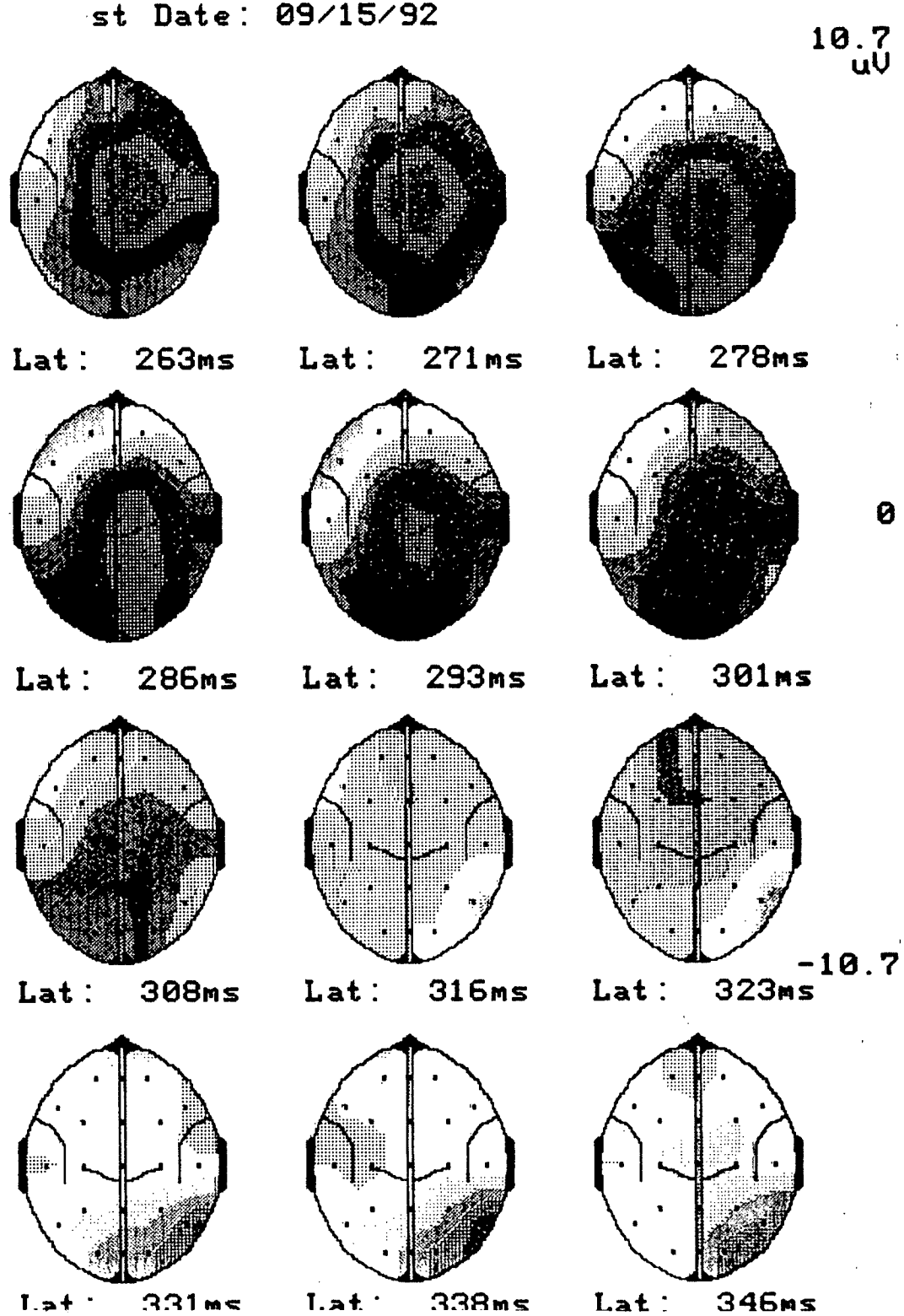

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Name: Rhoades, Rick
Age: 28.3 yrs

Analyzed: 09/16/92 Recorded: 09/15/92
Epochs: 37

tivariate Z score Measures

BIPOLAR		Left Hem	Right Hem	Posterior	Anterior	All
Total Absolute Power		0.03	1.16	-0.35	1.29	0.79
Total Power Asymmetry				-0.28	2.08	1.90
Relative Power	Δ	1.07	1.40	0.25	1.52	0.93
	θ	0.66	0.95	-0.73	0.41	0.66
	α	0.36	1.21	-0.68	1.09	0.84
	β	-0.06	0.49	0.13	0.07	-0.02
	Δ+θ	0.23	0.70	-0.68	1.01	0.48
	Combination	0.62	0.79	-0.03	1.20	-1.00
Interhem. Power Asymmetry	Δ			-0.45	0.67	0.08
	θ			-1.09	1.55	1.10
	α			0.03	1.93	1.76
	β			-1.66	1.23	0.73
	Combination			-0.85	1.25	0.57
Interhem. Coherence	Δ			-1.03	0.82	0.19
	θ			-1.20	0.97	0.31
	α			0.75	1.49	1.42
	β			0.65	1.12	1.03
	Combination			-0.11	1.61	1.27
rall				-0.49	2.31	-2.05

SELECTED MONOPOLAR

Absolute Combined Left Lateral	0.43
Absolute Combined Right Lateral	0.44
Absolute Delta Posterior	0.77
Absolute Combined Anterior	-0.00
Relative Alpha Left Lateral	0.68
Relative Alpha Right Lateral	1.07
Relative Delta Left Anterior	0.63
Relative Delta Right Anterior	0.28
Relative Delta Median	1.36
Relative Alpha Posterior	1.65
Relative Beta Anterior	0.07
Coherence Combined Central	1.00
Coherence Alpha All	1.23

Name: Rhoades, Rick
Age: 28.3 yrs

Analyzed: 09/16/92 Recorded: 09/15/92
Epochs: 37

Monopolar Z Score Measures

		Fp1	Fp2	F7	F8	F3	F4	C3	C4	Fpz	Fz	Cz
Absolute Power	Δ	-0.47	-0.09	0.50	1.04	-1.08	-0.12	-1.66	-1.13	-0.48	-0.64	-1.09
	θ	0.71	0.98	0.71	1.29	0.62	1.51	-0.15	0.21	1.17	1.26	0.24
	α	0.93	0.88	0.59	1.03	0.41	0.55	-0.03	0.35	0.97	0.42	0.27
	β	1.45	1.63	-0.10	0.59	-0.30	-0.00	-0.45	-0.11	0.87	-0.00	0.07
	T	0.66	0.80	0.49	1.09	0.03	0.56	-0.55	-0.08	0.70	0.36	-0.10
Relative Power	Δ	-1.48	-1.19	-0.04	-0.25	-1.14	-0.85	-1.00	-1.11	-1.53	-1.13	-1.00
	θ	0.04	0.29	0.35	0.34	0.93	1.58	0.67	0.41	0.86	1.54	0.52
	α	0.84	0.58	0.47	0.58	0.65	0.27	0.52	0.75	0.88	0.26	0.55
	β	0.95	0.99	-0.78	-0.77	-0.50	-0.79	0.02	-0.10	0.15	-0.45	0.17

Interhem. Power Asymmetry	Δ	-1.39	-0.76	-2.47	-1.24
	θ	-1.04	-1.01	-2.88	-1.01
	α	0.33	-1.25	-0.80	-1.62
	β	-0.33	-1.08	-1.00	-1.04
Interhem. Coherence	Δ	-3.50	0.25	-1.90	-0.79
	θ	-1.13	-0.40	-0.65	-1.36
	α	0.22	0.50	-0.11	-0.13
	β	-0.52	-0.31	-0.05	0.78

		T3	T4	T5	T6	P3	P4	O1	O2	Pz	Oz
Absolute Power	Δ	-0.75	-0.14	-1.31	-0.57	-1.32	-1.00	-1.20	-0.89	-1.33	-0.71
	θ	0.40	0.59	0.36	0.75	-0.10	0.49	0.68	0.46	0.20	0.73
	α	-0.20	0.21	1.27	1.98	1.44	1.93	1.81	1.80	1.67	2.09
	β	-0.99	-0.27	0.20	1.22	0.47	0.92	1.44	1.26	0.84	1.81
	T	-0.47	0.10	0.95	1.98	1.17	1.85	1.86	1.85	1.53	2.23
Relative Power	Δ	-0.28	-0.34	-2.47	-3.03	-2.47	-2.89	-3.10	-2.83	-2.65	-3.14
	θ	1.60	1.10	-1.15	-2.22	-1.86	-2.17	-2.02	-2.15	-2.02	-2.44
	α	0.15	0.30	1.86	2.28	2.09	2.36	2.04	2.10	2.13	2.18
	β	-0.83	-0.54	-1.16	-1.33	-1.04	-1.42	-1.04	-1.21	-1.09	-1.12

Interhem. Power Asymmetry	Δ	-0.25	-0.90	-0.81	-0.72
	θ	-0.41	-0.71	-1.76	0.69
	α	-0.45	-1.96	-1.76	0.14
	β	-0.40	-2.10	-1.30	0.40
Interhem. Coherence	Δ	-0.30	-1.09	-0.39	-1.55
	θ	-1.00	-1.03	-0.63	-2.74
	α	1.18	2.28	2.48	1.58
	β	-1.58	1.09	1.65	-1.45

Name: Rhoades, Rick
Age: 28.3 yrs

Analyzed: 09/16/92 Recorded: 09/15/92
Epochs: 37

Monopolar Z Score Measures - Page 2

		Fp1	Fp2	F7	F8	F3	F4	C3	C4	Fpz	Fz	Cz
Mean Frequency	Δ	-0.59	-0.29	-2.11	-1.56	-0.95	0.17	1.62	1.77	0.20	0.48	1.55
	θ	0.72	0.83	0.19	0.97	0.94	1.28	0.70	1.42	1.01	1.22	0.84
	α	0.33	0.05	0.02	1.32	-0.29	-0.66	-0.11	-0.11	0.11	-0.61	-0.03
	β	1.34	1.34	0.17	-0.57	-0.17	-0.58	-0.01	0.18	0.53	-0.31	-0.21
	T	1.61	1.51	-0.07	0.19	0.23	-0.06	0.48	0.76	1.10	0.76	0.12

		F3/T5	F4/T6	F7/T5	F8/T6
Intrahem. Power Asymmetry	Δ	0.65	0.74	2.24	1.85
	θ	0.16	0.56	0.32	0.48
	α	-1.95	-3.05	-1.66	-2.27
	β	-0.71	-2.04	-0.43	-1.10

		Fp1/F3	Fp2/F4	T3/T5	T4/T6
Intrahem. Coherence	Δ	-0.78	-1.48	-0.71	-0.79
	θ	0.49	-0.27	-0.41	-1.85
	α	0.16	-1.00	-0.22	1.42
	β	-0.32	-1.65	0.20	0.31

		T3	T4	T5	T6	P3	P4	O1	O2	Pz	Oz
lean Frequency	Δ	1.37	0.19	1.88	1.39	0.74	1.49	0.72	1.38	1.33	0.70
	θ	0.24	0.49	0.78	1.89	0.18	1.43	1.69	1.01	0.81	0.23
	α	-0.56	-0.10	0.03	-0.22	-0.02	-0.02	-0.04	-0.08	0.06	0.09
	β	-0.54	-0.06	0.52	0.21	1.20	0.60	1.25	0.52	0.87	1.46
	T	-0.65	-0.20	0.93	0.93	1.17	1.15	1.16	0.92	1.33	1.10

		F3/O1	F4/O2	O1/F7	O2/F8
Intrahem. Power Asymmetry	Δ	0.47	1.10	-1.96	-1.97
	θ	-0.31	0.95	0.16	-0.84
	α	-2.67	-2.36	2.44	1.70
	β	-2.53	-1.88	2.20	1.08

		C3/P3	C4/P4	F3/O1	F4/O2
Intrahem. Coherence	Δ	-0.61	-0.37	-0.62	-0.78
	θ	-0.41	-0.91	-1.81	-0.86
	α	-0.73	0.83	1.45	1.31
	β	-0.01	0.30	-1.01	0.51

Name: Rhoades, Rick
Age: 28.3 yrs

Analyzed: 09/16/92 Recorded: 09/15/92
Epochs: 37

Bipolar Z Score Measures

		Central		Temporal		Parietal Occipital		Frontal Temporal	
		C3/Cz	C4/Cz	T3/T5	T4/T6	P3/O1	P4/O2	F7/T3	F8/T4
Total Absolute Power		0.20	0.12	1.15	2.02	0.95	0.64	0.44	2.08
Total Power Asymmetry		0.24		-2.15		0.84		-3.10	
Relative Power	Δ	-0.76	-0.97	-1.98	-2.58	-1.70	-1.19	-0.19	-1.15
	θ	0.77	0.83	-1.01	-1.13	-0.21	0.03	0.07	-1.14
	α	0.81	0.66	1.73	1.84	0.98	0.59	1.21	2.06
	β	-1.05	-0.70	-1.37	-1.37	-0.51	-0.02	-1.43	-1.65
	Δ+θ	-0.12	-0.11	-1.56	-1.81	-0.90	-0.60	-0.22	-1.31
	Combination	0.80	1.02	0.81	1.62	1.11	0.40	0.01	0.83
Interhem. Power Asymmetry	Δ	0.60		-0.96		-0.29		-1.26	
	θ	0.16		-1.88		0.48		-1.88	
	α	0.30		-1.68		0.97		-3.10	
	β	-0.37		-1.73		0.07		-1.45	
	Combination	-0.73		0.76		-0.08		1.31	
Interhem. Coherence	Δ	0.19		-0.70		-0.53		-1.52	
	θ	0.02		0.86		-0.50		-1.67	
	α	-1.64		2.16		-0.27		1.98	
	β	0.53		1.51		-1.52		1.55	
	Combination	0.20		0.95		0.02		1.83	
Overall		-0.41		1.55		-0.19		2.41	

DEFENSE EXHIBIT 31

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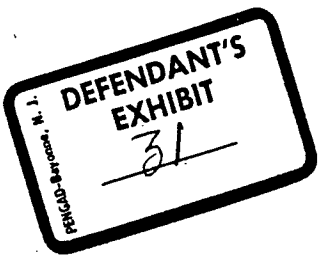

TDC NO	NAME	SOC-SEC-NO	DATE-OF-BIRTH	RECEIVED-GED	CERTIFICATE-ISSUED	UNIT-TESTED	TOT-STND-SCRE	STATUS
550587	MARCAS,DAVID ALAN	000000000	041062	YES	YES	J3	333	ACTIVE

	TEST-DATE	FORM	TEST-RETEST	RAW-SCORE	STND-SCORE	PERCENTILE	PASS-FAIL
TEST 1	0491	AH		049	60	84 %	PASS
TEST 2	0491	AH		059	77	99 %	PASS
TEST 3	0491	AH		054	63	91 %	PASS
TEST 4	0491	AH		039	75	99 %	PASS
TEST 5	0491	AH		040	58	78 %	PASS
TEST 6	0000			000	00	00 %	

VERIFICATION FOR ENROLLMENT

In

Windham ✓ College ____

NAME Marcas David DATE 12-11-90

NUMBER 550577 ALL PRIOR #'s ____

UNIT 33 DATE OF BIRTH 4/10/62 SS# ____

INSTRUCTIONS: Complete the following sections. Attach a release form (HD 7120) for each transcript requested.

SECTION I: Name of High School:
Lewis High - Groom

SECTION II: Name of GED Testing Center:

SECTION III: Colleges Attended:

Do Not Write Below This Line - Office Use Only

DATE DEC 11 1990

This student (HAS)/HAS NOT BEEN verified for (WINDHAM)/COLLEGE enrollment based on:

____ High School Transcript

____ College Transcript

____ GED Scores on file

____ Did not meet requirements for high school diploma

____ Cannot obtain transcript due to financial block

____ Need transcript fee $ ____

____ Failed GED test, parts ____

✓ Institute has no record of attendance or GED testing

____ No reply to request

____ Request returned to sender

Case 4:14-cv-03152 Document 38-58 Filed on 09/01/16 in TXSD Page 226 of 265

VERIFICATION FOR COLLEGE ENROLLMENT

USE THIS FORM FOR COLLEGE ENROLLMENT PURPOSES ONLY

NAME DAVID AIAN MARCAS DATE 7-2-90

NUMBER 550587 ALL PRIOR #'s

UNIT Jester 3 DATE OF BIRTH 4-10-62 SS# ?

INSTRUCTIONS: Complete only ONE of the following sections. ***Attach a release form for each transcript requested.***

SECTION I: Name of High School: (Do not order if you did not graduate)

AUG 1 1990

Lewis High

SECTION II: Name of GED Testing Center: (Do not order if you did not pass)

SECTION III: Colleges Attended:

11-29-30

Dati

Plea Clear

to GED test.

Lewis N. D.
Ontario, Canada
1976-80

Do Not Write Below This

DATE 9-4-90

This student **HAS BEEN** verified for enrollment based on:

____ High School Transcript

____ College Transcript

____ GED Scores on file

This student **HAS NOT BEEN** verified for enrollment based on:

____ Did not meet requirements for high school diploma

____ Cannot obtain college transcript due to financial block

____ Need transcript fee $ ____

____ Failed GED test, parts ____

____ Institute has no record of attendance or GED testing

____ No reply to request

✓ Request returned to sender Insufficient Address

____ Other: ____

TEXAS DEPARTMENT OF CORRECTIONS
REPORT OF VOCATIONAL TRAINING COMPLETION

Name Marcas (Last) David (First) (M.I.) Unit Jester III

TDC Number 550587

Date Completed Training 06 (Month) 18 (Day) 91 (Year)

Course Title/Trade Area Business Comp. Ofcr

D.O.T. Number 213.362-010

Check One of the Following:

Windham School System	✓
College:	
Alvin Community College	
Blinn College	
Central Texas College	
Trinity Valley Community College	
Lee College	
Apprenticeship Program	
Vocational Short Courses Texas A&M University	

I certify that the above named inmate has satisfactorily completed vocational training in the program indicated.

(Authorized Signature)

JUL 30 1991

Distribution:
Original — Classification
Copy — File

Form Revised 5/89

v. 6/90

TEXAS DEPARTMENT OF CRIMINAL JUSTICE

INSTITUTIONAL DIVISION

INMATE JOB MANAGEMENT SYSTEM
VOCATIONAL TRAINING STATUS CHANGE

TDC Number: 550587

Name: MARCAS, DAVID

Course Code and Title: 140200 BUSINESS COMP OPER

Unit: J3

School Code: W .100%

Effective Start Date: 04/02/91

Effective End Date: 06/18/91

Instructor Name: RICE, CINDY

Skill Code:

Status Type: D

Certificate: [Y]es [N]o Y

Performance Rating: [O]utstanding [G]ood [A]verage [B]elow Average [U]nsastiefactory

Proficiency Rating: [S]killed [M]oderately Skilled [L]imited Skilled [U]nskilled

Reason For Drop: C - COMPLETED

Class Hours Accumulated: 562

Status Code: [A]dd [C]hange [D]elete C

WSS Final Test Taken: [Y]es [N]o Y

College Vocational Sections

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.
11.
12.
13.

Instructor Signature — 6-20-91 — Date — N Pollard — Principal Signature

JUL 22 1991

Control Clerk1 Signature — Date — Control Clerk2 Signature — Date

SEGMENTED

CO.0007

BUSINESS COMPUTER APPLICATIONS STUDENT PROGRESS RECORD
WINDHAM VOCATIONAL DEPARTMENT

STUDENT Marcus, David 1-10-97

TDC # 550587

UNIT J-3

TEACHER Rico

SEGMENT TEST SCORE 1 100 2 87 3 94 4 97 Total Skills Completed 47

(CENTRAL OFFICE USE ONLY)

Date ___/___/___ Final Written Exam Score 95.50 Final Skill Exam Score 100.0 Average 94.50 Final Course Score 96.60

Type of Certificate Issued (check one): Achievement_____ Participation_____ 47 SKILLS TOTAL

I have read all Material Safety Data Sheets (MSDS) information related to this program and understand the implied hazards in using these products.

David Marcus
Signature

1-30-91
Date

	UNIT / SKILLS	UNIT WRITTEN SCORE	UNIT TEST DATE	TEACHER / STUDENT INITIALS	TAUGHT IN SEGMENTS 1	2	3	4
VO 1-	VOCATIONAL ORIENTATION	100	12491	CR Dam	●	●	●	●
VS 1-	VOCATIONAL SAFETY	100	11891	CR Dam	●	●	●	●
EE 1-	LOCATING, GETTING AND KEEPING A JOB	100	22691	CR DAM	●		●	
EE 2-	OWNING AND MANAGING YOUR OWN BUSINESS	100	22691	CR DAM	●		●	
EE 3-	GETTING ALONG WITH YOURSELF & OTHERS	100	12491	CR Dam		●		●
EE 4-	LEARNING TO LEAD	100	12491	CR Dam		●		●
CO 7-	OPERATING THE MICROCOMPUTER	100	51491	CR Dam	●			
CO 8-	EVALUATION & SELECTING MICROCOMPUTERS	98	42391	CR Dam				●
CO 9-	DATA PROCESSING, BACKGROUND AND USES OF	100	22191	CR Dam				●
CO 10-	DATA ENTRY AND MANUAL ACCOUNTING	90	41991	CR Dam				●
CO 11-	INPUT/OUTPUT DEVICES AND MEDIA	100	41291	CR Dam				●
CO 12-	THE CENTRAL PROCESSING UNIT	100	52891	CR Dam	●			
CO 13-	INTRODUCTION TO OPERATING SYSTEMS	100	21991	CR Dam			●	
	CO 13-1 Setting Up Your Computer						●	
	CO 13-2 Starting MS-DOS						●	
	CO 13-3 Exiting MS-DOS						●	
CO 14-	STAND-ALONE COMPUTER OPERATIONS	93	12191	CR Dam	●	●	●	●
	CO 14-1 Format a Diskette				●	●	●	●
	CO 14-2 Backup Diskette				●	●	●	●
	CO 14-3 Change a Current Drive				●	●	●	●
	CO 14-4 Load and Run an Application Program				●	●	●	●
CO 15-	INTRODUCTION TO MULTI-USER APPLICATIONS	100	52491	CR Dam	●			
	CO 15-1 Power-up the System				●			
	CO 15-2 Log In and Out				●			
	CO 15-3 Change Password				●			
	CO 15-4 Power Down a System (Shutdown)				●			
CO 16-	COMPUTER LANGUAGE & PROGRAMMING CONCEPTS	98	52891	CR Dam	●			
	CO 16-1 Construct a Simple Program Flowchart				●			
	CO 16-2 Write and Execute a BASIC Program				●			

	DATE SKILL ACHIEVED	DATE SKILL ASSIGNED
1	1 14 91	1 11 91
2	1 14 91	1 11 91
3.	1 14 91	1 11 91
5	1 17 91	1 17 91
6	1 17 91	1 17 91
7	1 14 91	1 11 91
8	1 25 91	1 11 91
10	1 17 91	1 17 91
11	1 28 91	1 25 91
12	1 17 91	1 17 91
13	1 17 91	1 17 91
	3 29 91	3 1 91
16	3 29 91	3 1 91

CO.000

SEGMENTED

BUSINESS COMPUTER APPLICATIONS STUDENT PROGRESS RECORD
WINDHAM VOCATIONAL DEPARTMENT

STUDENT Marcus

TDC # 550587

UNIT J-3

TEACHER Ric

	DATE SKILL ACHIEVED	DATE SKILL ASSIGNED	UNIT / SKILLS	UNIT WRITTEN SCORE	UNIT TEST DATE	TEACHER / STUDENT INITIALS	TAUGHT IN SEGMENTS 1	2	3	4
			CO 20- USING A SPREADSHEET	85	2/27/91	CR Dsm				
44.	4/19/91	3/1/91	CO 20-1 Create a Report Format using a Spreadsheet Program							●
45.	4/19/91	3/1/91	CO 20-2 Enter Labels into a Spreadsheet							●
46.	4/19/91	3/1/91	CO 20-3 Create and Enter Formulas in a Spreadsheet							●
47.	4/19/91	3/1/91	CO 20-4 Enter Data into a Spreadsheet							●
48.	4/19/91	3/1/91	CO 20-5 Re-Calculate a Spreadsheet							●
49.	4/19/91	3/1/91	CO 20-6 Move Rows and Columns in a Spreadsheet							●
50.	4/19/91	3/1/91	CO 20-7 Add and Delete Rows and Columns in a Spreadsheet							●
51.	4/19/91	3/1/91	CO 20-8 Create and Use Named Ranges in a Spreadsheet							●
52.	4/19/91	3/1/91	CO 20-9 Create and Use Supporting Worksheets in a Spreadsheet							●
53.	4/19/91	3/1/91	CO 20-10 Print a Portion of a Spreadsheet							●
54.	4/19/91	3/1/91	CO 20-11 Print an Entire Spreadsheet							●
			CO 21- CAREERS IN INFORMATION PROCESSING	92		DLH Dsm				●

Rev. 4/83

TEXAS DEPARTMENT OF CORRECTIONS
INMATE JOB MANAGEMENT SYSTEM
VOCATIONAL TRAINING STATUS CHANGE
(WSS submit in triplicate to Vocational Office)

TDC NUMBER 550587 (3-6)
NAME MARCAS, DAVID (9-12)
COURSE TITLE BUSINESS COMP OPER A.M.
UNIT JESTER III
SCHOOL WINDHAM SCHOOL SYSTEM
EFFECTIVE START DATE 04/02/91 (23-28)
EFFECTIVE END DATE (29-34)
INSTRUCTOR'S NAME RICE, C. (35-49)
ICT SKILL TITLE

STATUS CHANGE TYPE: X - ADD / DROP (57)

CERTIFICATE RECOMMENDED: (Apprentice and College Use Only) ___ YES ___ NO (58)

PERFORMANCE RATING: (59)
___ OUTSTANDING
___ GOOD
___ AVERAGE
___ BELOW AVERAGE
___ UNSATISFACTORY

PROFICIENCY RATING: (60)
___ SKILLED
___ MODERATELY SKILLED
___ LIMITED SKILLED
___ UNSKILLED

REASON FOR DROP: ___ (61)
___ (U) UNIT TRANSFER
___ (D) RELEASED FROM T.D.C.
___ (B) BENCH WARRANT
___ (M) MEDICAL
___ (O) DISCIPLINARY OFFENSE
___ (I) INMATE REQUEST
___ (N) CLASS TEMPORARILY SUSPENDED
___ (L) CLASS DISCONTINUED
___ (C) COMPLETED COURSE/CYCLE
___ (H) EDUCATIONAL ADMINISTRATIVE REQUEST
___ (X) UNSATISFACTORY PROGRESS
___ (E) COMPUTER INPUT ERROR
___ (G) INELIGIBLE
___ (A) T.D.C. ADMINISTRATIVE REQUEST
___ (F) SCHEDULE CHANGE/CONFLICT

CLASS HOURS ACCUMULATED 255 (62-65)
GED FINAL TEST TAKEN ___ YES ___ NO

TO BE COMPLETED BY CONTROL CLERK

COURSE CODE 140200 (13-19)
UNIT CODE J3 (20-21)
SCHOOL CODE W (22)
SKILL CODE (50-56)

MEETS CRITERIA Y=YES N=NO
___ TIME LEFT (66)
___ E.A. SCORE (67)
___ PIP SCORE (68)
___ INMATE STATUS (69)
___ MEDICAL CLASS (70)
___ DIPLOMA/GED (71)
___ GATB APTITUDE (72)

RECORD STATUS CHANGE
✓ ADD (73)
___ CHANGE
___ DELETE

APR 08 1991
IJMS CONTROL CLERK SIGNATURE DATE

Apr. 2, 1991

Rev.4/83

TEXAS DEPARTMENT OF CORRECTIONS
INMATE JOB MANAGEMENT SYSTEM
VOCATIONAL TRAINING STATUS CHANGE
(USS submit in triplicate to Vocational Office)

TDC NUMBER 550587 (3-6)
NAME MARCAS, DAVID (9-12)
COURSE TITLE BUSINESS COMP OPER A.M.
UNIT JESTER III
SCHOOL WINDHAM SCHOOL SYSTEM
EFFECTIVE START DATE 04/02/91 (23-28)
EFFECTIVE END DATE (29-34)
INSTRUCTOR'S NAME RICE, C. (35-49)
ICT SKILL TITLE

STATUS CHANGE TYPE: X - ADD
DROP (57)

CERTIFICATE RECOMMENDED: ___ YES
(Apprentice and College Use Only) ___ NO (58)

PERFORMANCE RATING:
___ OUTSTANDING
___ GOOD
___ AVERAGE (59)

TO BE COMPLETED BY CONTROL CLERK

COURSE CODE 140200 (13-19)

UNIT CODE T3 (20-21)

SCHOOL CODE W (22)

SKILL CODE ____ (50-56)

Inmate Marcas
#550587
drop and add
in error
S/B Business Computer
Effective Date 1/10/91
start

Men are like computer programs:
Smart women always keep a back-up

MEETS CRITERIA Y=YES N=NO

___ TIME LEFT (66)
___ E.A. SCORE (67)
___ PIP SCORE (68)
___ INMATE STATUS (69)
___ MEDICAL CLASS (70)
___ DIPLOMA/GED (71)
___ GATB APTITUDE (72)

___ REQUEST
___ (X) UNSATISFACTORY PROGRESS
___ (E) COMPUTER INPUT ERROR
___ (G) INELIGIBLE
___ (A) T.D.C. ADMINISTRATIVE REQUEST
___ (F) SCHEDULE CHANGE/CONFLICT

RECORD STATUS CHANGE
✓ ADD (73)
___ CHANGE
___ DELETE

APR 10 1991
IJMS CONTROL CLERK SIGNATURE DATE

CLASS HOURS ACCUMULATED 255 (62-65)
IS FINAL TEST TAKEN ___ YES ___ NO

Case 4:14-cv-03192 Document 38-58 Filed on 09/01/16 in TXSD Page 253 of 265

TEXAS DEPARTMENT OF CORRECTIONS
INMATE JOB MANAGEMENT SYSTEM
VOCATIONAL TRAINING STATUS CHANGE
(WSS submit in triplicate to Vocational Office)

C ' R 550587 (3-6)
M. MARCAS, DAVID (9-12)
URSE TITLE BUSINESS COMP OPER A.M.
IT JESTER III
HOOL WINDHAM SCHOOL SYSTEM
FECTIVE START DATE 01/10/91 (23-28)
FECTIVE END DATE 03/15/91 (29-34)
STRUCTOR'S NAME RICE, C. (35-49)
SKILL TITLE

TUS CHANGE TYPE: ADD (57)
X - DROP

TIFICATE RECOMMENDED: ___ YES (58)
prentice and ___ NO
College Use Only)

FORMANCE RATING:
___ OUTSTANDING
___ GOOD (59)
___ AVERAGE
___ BELOW AVERAGE
___ UNSATISFACTORY

FICIENCY RATING:
___ SKILLED
___ MODERATELY SKILLED
___ LIMITED SKILLED (60)
___ UNSKILLED

SON FOR DROP:
G
___ (U) UNIT TRANSFER
___ (D) RELEASED FROM T.D.C.
___ (B) BENCH WARRANT
___ (M) MEDICAL
___ (O) DISCIPLINARY OFFENSE
___ (I) INMATE REQUEST
___ (N) CLASS TEMPORARILY SUSPENDED
___ (L) CLASS DISCONTINUED (61)
___ (C) COMPLETED COURSE/CYCLE
___ (H) EDUCATIONAL ADMINISTRATIVE REQUEST
___ (X) UNSATISFACTORY PROGRESS
___ (E) COMPUTER INPUT ERROR
X - (G) INELIGIBLE
___ (A) T.D.C. ADMINISTRATIVE REQUEST
___ (F) SCHEDULE CHANGE/CONFLICT

'S HOURS ACCUMULATED 255 (62-65)
FINAL TEST TAKEN ___ YES ___ NO

C. Rice

Apr 1, 1991

TO BE COMPLETED BY CONTROL CLERK

COURSE CODE _____ (13-19)

UNIT CODE _____ (20-21)

SCHOOL CODE _____ (22)

SKILL CODE _____ (50-56)

MEETS CRITERIA Y=YES N=NO

___ TIME LEFT (66)
___ E.A. SCORE (67)
___ PIP SCORE (68)
___ INMATE STATUS (69)
___ MEDICAL CLASS (70)
___ DIPLOMA/GED (71)
___ GATB APTITUDE (72)

RECORD STATUS CHANGE
___ ADD (73)
___ CHANGE
___ DELETE

IJMS CONTROL CLERK SIGNATURE

APR 10 1991
DATE

L. Rollins

Case 4:14-cv-03152 Document 38-5 Filed on 09/01/16 in TXSD Page 234 of 265

IJMS-13
Rev.4/83

TEXAS DEPARTMENT OF CORRECTIONS
INMATE JOB MANAGEMENT SYSTEM
VOCATIONAL TRAINING STATUS CHANGE
(WSS submit in triplicate to Vocational Office)

TDC NUMBER 550587 (3-6)
NAME MARCAS, DAVID (9-12)
COURSE TITLE BUSINESS COMP OPER A.M.
UNIT JESTER III
SCHOOL WINDHAM SCHOOL SYSTEM
EFFECTIVE START DATE 01/10/91 (23-28)
EFFECTIVE END DATE (29-34)
INSTRUCTOR'S NAME RICE, C. (35-49)
ICT SKILL TITLE

STATUS CHANGE TYPE: X - ADD / DROP (57)

CERTIFICATE RECOMMENDED: ___ YES ___ NO (58)
(Apprentice and College Use Only)

PERFORMANCE RATING: ___ OUTSTANDING ___ GOOD ___ AVERAGE ___ BELOW AVERAGE ___ UNSATISFACTORY (59)

PROFICIENCY RATING: ___ SKILLED ___ MODERATELY SKILLED ___ LIMITED SKILLED ___ UNSKILLED (60)

REASON FOR DROP: ___
___ (U) UNIT TRANSFER
___ (D) RELEASED FROM T.D.C.
___ (B) BENCH WARRANT
___ (M) MEDICAL
___ (O) DISCIPLINARY OFFENSE
___ (I) INMATE REQUEST
___ (N) CLASS TEMPORARILY SUSPENDED
___ (L) CLASS DISCONTINUED (61)
___ (C) COMPLETED COURSE/CYCLE
___ (H) EDUCATIONAL ADMINISTRATIVE REQUEST
___ (X) UNSATISFACTORY PROGRESS
___ (E) COMPUTER INPUT ERROR
___ (G) INELIGIBLE
___ (A) T.D.C. ADMINISTRATIVE REQUEST
___ (F) SCHEDULE CHANGE/CONFLICT

CLASS HOURS ACCUMULATED _____ (62-65)

TO BE COMPLETED BY CONTROL CLERK

COURSE CODE 140200 (13-19)

UNIT CODE J3 (20-21)

SCHOOL CODE W (22)

SKILL CODE _____ (50-56)

MEETS CRITERIA (Y=YES, N=NO)
___ TIME LEFT (66)
___ E.A. SCORE (67)
___ PIP SCORE (68)
___ INMATE STATUS (69)
___ MEDICAL CLASS (70)
___ DIPLOMA/GED (71)
___ GATB APTITUDE (72)

RECORD STATUS CHANGE
✓ ADD (73)
___ CHANGE
___ DELETE

IJMS CONTROL CLERK SIGNATURE _____ DATE

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STUDENT PARTICIPATION RECORD
WINDHAM SCHOOL SYSTEM

Name: RHOADES, RICK TDC Number: 437405

E.A. SCORES

Highest E.A. Score: 8.2 Initial E.A. Score: _____
Date: _____ Date: _____

	Read.	Math	Lang.	Total	Type	Date
1.						
2.						
3.						
4.						

G.E.D SCORES

Writing	Soc.Studies	Science	Reading	Math	Total
_____	_____	_____	_____	_____	_____

Program	Unit	Date Enrolled	Date Dropped	Drop Reason
ACADEMIC	B1	08/13/86	12/03/86	RECEIVED G.E.D.
MUSIC	B1	10/17/86	10/20/86	JOB TRANFER

HV Group

NAME:

DISCIPLINE: MATHEMATICS - PERCENTS

TPO	DATE	MATERIAL	STRATEGIES
NUMERICAL & ALGEBRAIC OPERATIONS T.P.O. 4 PERCENTS		(1) CAMBRIDGE PROGRAM PERCENTS PAGE 581-597 (2) CAMBRIDGE MATH TEST PERCENTS PAGE 116-146 (3) CAMBRIDGE EXERCISES PERCENT EXERICSES PAGE 25-34 (4) MET/CAMBRIDGE VIDEO TAPE MATH III - PERCENTS MATH IV - PERCENTS AND INTEREST	LECTURE EXAMPLES MONITORING CLASS DISCUSSION CHALKBOARD INDEPENDENT STUDY SUMMARY TEST

WINDHAM SCHOOL SYSTEM - STUDENT PROGRESS RECORD

Name [redacted]

TDC No. [redacted]-1963

Enrollment Date 8-16-86 Unit Melo I

Enrollment Date _____ Unit _____

Enrollment Date _____ Unit _____

Enrollment Date _____ Unit _____

INSTRUCTIONS

Record identification data and enrollment data requested.

The Instructional Objective (IO) number is shown above each block. In the upper half of the block, enter the number of the month and year in which work on the IO begins. For example, if a student begins work on an objective in September of 1981, write 9-81. In the lower half of the block, enter the number of the month and year in which the IO has been attained.

Use blue or black ball point in making entries on the Student Progress Record (SPR).

COMMUNICATIONS

READING I

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

READING II

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

READING III

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
		8-86							8-86															
		8-86																						
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

SPELLING I

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

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SENT BY: XEROX Telecopier 7017;10-5-92 ;11:24AM ; JESTER UNIT III;#17 44-
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Name _____

TDC No. _____

MATHEMATICS

	Phase I	Phase II	Phase III
GENERAL	1 2 3 4 5	1 2 3 4 5 / 6 7 8 9 10	1 2 3 4 5 / 6 7 8 9 10
NUMBERS AND NUMBER SYSTEMS	1 2 3 4 5 / 6 7 8 9 10	1 2 3 4 5 / 6 7 8 9 10 / 11 12 13 14 15 / 16 17 18 19 20	1 2 3 4 5 / 6 7 8 9 10 / 11 12 13 14 15 / 16 17 18 19 20
NUMERIC AND ALGEBRAIC OPERATIONS	1 2 3 4 5 / 6 7 8 9 10	1 2 3 4 5 / 6 7 8 9 10 / 11 12 13 14 15 / 16 17 18 19 20	1 2 3 4 5 / 6 7 8 9 10 / 11 12 13 14 15 / 16 17 18 19 20
OPERATIONS USING GRAPHICS	1 2 3 4 5	1 2 3 4 5 / 6 7 8 9 10	1 2 3 4 5 / 6 7 8 9 10
GEOMETRY	1 2 3 4 5 / 6 7 8 9 10	1 2 3 4 5 / 6 7 8 9 10 / 11 12 13 14 15 / 16 17 18 19 20	1 2 3 4 5 / 6 7 8 9 10 / 11 12 13 14 15 / 16 17 18 19 20
MEASUREMENT AND PROBABILITY	1 2 3 4 5	1 2 3 4 5 / 6 7 8 9 10	1 2 3 4 5 / 6 7 8 9 10
SETS AND LOGIC	1 2 3 4 5	1 2 3 4 5 / 6 7 8 9 10	1 2 3 4 5 / 6 7 8 9 10

SENT BY:CASEY 14 pc 03152700 Document 1-38 Filed on 09/01/16 in TXSD Page 23 of 25 ; 3-15-04 ; 2:58PM ; 512 305 4801 → Page 23/25 III;#18

PROBLEM SOLVING

SCIENCE

Phase I | Phase II | Phase III

LIVING THINGS

PRACTICAL CHEMISTRY

WEATHER

MACHINES AND ENERGY

MAGNETISM & ELECTRICITY

THE UNIVERSE

THE SOCIAL SCIENCES

Phase I

Phase II

Phase III

DEFENSE EXHIBIT 35

THE STATE OF TEXAS

BUSINESS RECORDS AFFIDAVIT

COUNTY OF HARRIS

BEFORE ME, the undersigned authority, personally appeared x Anita Garrett, who, being by me duly sworn, deposed as follows:

My name is x Anita Garrett, I am of sound mind, capable of making this affidavit, and personally acquainted with the facts herein stated.

I am the Custodian of the Records of MHMRA. Attached hereto are 9 pages of records kept by MHMRA in the regular course of business. It was the regular course of business of MHMRA for an employee or representative of MHMRA, with knowledge of the act, event, condition, opinion or diagnosis, recorded to make the records and the records were made at or near the time or reasonably soon thereafter. The records attached hereto are exact duplicates of originals.

x Anita N. Garrett
AFFIANT

SWORN TO AND SUBSCRIBED before me on this the 18 day of SEPTEMBER, 1992.

A G Rodriguez
NOTARY PUBLIC IN AND FOR THE STATE OF TEXAS

A. G. RODRIGUEZ
Notary Public, State of Texas
My Commission Expires
8/03/93.

NOTARY'S PRINTED NAME
Commission Expires: 8-3-93

(D)

PSYCHIATRIC SCREENING

Name: Rhondes, Rick	MHMRA No:	SPN: 1001375
DOB: 5-10-64	Sex: (M) F	Race: B (W) H	Charges: Capital Murder

Source Code: DM	N - New (R) Repeat	Date: 12/17/91	Time: 0930	Place: TB2
No. Prev. Hosp:	Prev. OP? Y N	Homeless? Y N	DIV: I E	
Milieu: Y N	PD: Y N	React: Y N	Hx Meds:	

JAO 7

History and Mental Status: Referred by medical Divison for Psych consult

I dr spoke pt that pt is having auditory hallucinations

Impression: Personality disorder (antisocial)

NOTE: The initial impression above is not a diagnosis, but a tentative hypothesis based upon a brief screening interview. It is not to be used for diagnostic purposes.

Disposition: Psych Pkg / D/C Haldol

Medications Recommended: None

Svc Grp: 4	Disp: RM	Hsg:	Fol:	Out Ref(s):
Interview Hrs:	Min: 21	Liason Hrs:	Min: 18	Documentation Hrs: Min: 16

Date: 12-17-91	Signature/Title:
Date: 12-17-91	Signature/Title:

Marcas, David Alan

PSYCHIATRIC SCREENING

204 Briarglen

Name: Rhoades, Ricle Allan	MHMRA No: 113014	SPN: 100 1375
DOB: 5.10.64	Sex: (M) F	Race: B (W) H
Charges: Cap. Mur.		

4-10-62 - 4-12-69

Source Code: D	N - New	R - Repeat	Date: 12.13.91	Time: 1500	Place: Jail 7B2
No. Prev. Hosp: 2-3	Prev. OP? Y (N)		Homeless? Y (N)	DIV: (1) E	
Milieu: Y (N)	PD: Y (N)	React: Y (N)	Hx Meds: Elavil / Xanax / Prolixin / Lithium / ~~Halcion~~ / ~~Ativan~~		

History and Mental Status: Pt referred by self 2° problems c impulse control. Feels like he is about to actually hurt self or somebody else. Has been on medication in past. Has periods of intense happiness followed by periods of depression. Feels like only way of relief is suicide.

MSE AA O x 3
Affect restricted Affect congruent
(+) SI - no suicide attempt (+) HI - relieves tension by attacking others
(+) auditory hallucinations - tell him to do himself in
thought: goal-directed

Memory 3/3 @ 0' 3/3 @ 5'

Substance Abuse: (+) glue-sniffing (+) STOT
Education: 9th grade

Impression: (1) Impulse control disorder

NOTE: The initial impression above is not a diagnosis, but a tentative hypothesis based upon a brief screening interview. It is not to be used for diagnostic purposes.

Disposition: refer to psychiatrist

Medications Recommended:

Svc Grp: 4	Disp: RP	Hsg:	Fol:	Out Ref(s):
Interview Hrs:	Min: 17	Liason Hrs:	Min: 14	Documentation Hrs: Min: 18

Date: 12.13.91	Signature/Title: Matthew W. Yarger
Date: 12-13-91	Signature/Title:

PSYCHIATRIC SCREENING

Name: Rhoades, Rick	MHMRA No:	SPN: 1001375
DOB: 5.10.64	Sex: (M) F	Race: B (W) H
Charges: Capital Murder		

JA07

Source Code: D1	N - New R (Repeat)	Date: 12-13-91	Time: 1530	Place: 7B2
No. Prev. Hosp:	Prev. OP? Y N	Homeless? Y N	DIV: I E	
Milieu: Y N	PD: Y N	React: Y N	Hx Meds:	

History and Mental Status: Consult request for a 24 yo white male with + auditory hallucinations. At times he hears other people in order to relieve tension.

Impression: Psychosis NOS

NOTE: The initial impression above is not a diagnosis, but a tentative hypothesis based upon a brief screening interview. It is not to be used for diagnostic purposes.

Disposition: Start meds

Medications Recommended:

Haldol 5mg po q HS x 1 then 10 mg po q HS if tolerated

Svc Grp: 4	Disp: MI	Hsg:	Fol: 4W	Out Ref(s):
Interview Hrs:	Min: 10	Liason Hrs:	Min: 15	Documentation Hrs: Min: 4

Date: 12/13/91	Signature/Title: H. Claude Parker
Date: 12/13/91	Signature/Title: Martin McGee MD

JA07
7B2

FORENSIC PSYCHIATRIC SERVICES

CONSULTATIONS REQUEST AND REPORT

Client's Name: Rhoades, Rick **Case Number:** 100137

Physician: _____

Request Date: _____ **Time:** _____

To: _____ **From:** _____

With reference to: _____

REPORT DATE: 12-17-91 **TIME:** 915

Name of Person Making Report: _____

FINDINGS AND RECOMMENDATIONS:

Pt had been started on haldol;
D/C haldol please

7B2

FORENSIC PSYCHIATRIC SERVICES

CONSULTATIONS REQUEST AND REPORT

Client's Name: Rhoades, Rick **Case Number:** 100375

Physician: Penlon

Request Date: _____ **Time:** _____

To: _____ **From:** _____

With reference to: _____

REPORT DATE: 12.13.91 **TIME:** 1530

Name of Person Making Report: _____

FINDINGS AND RECOMMENDATIONS:

Pt is 24 yo WM with auditory hallucinations.

Medications

haldol 5mg po q HS x 1

then 10 mg po q HS x 30 days.

Claude Penlon MD.

MHMRA #020

HARRIS COUNTY SHERIFF'S DEPARTMENT
DETENTION BUREAU

REFERRAL FOR PSYCHIATRIC SCREENING

A. Name: Rhoades, Lucky DOB: 5/10/64 SPN: 1001375

Sex: M F Race: W B H Other: _____ Cellblock: 7B1C (A&T)

Charges/Bond: _____

B. Possible Psychiatric Problems: Circle and explain.

(1) Is thinking of killing self. (2) Very frightened.

(3) Unusual sexual acts. (4) Strange or unusual behavior.

(5) Very confused. (6) Unable to move.

(7) Unable to keep still. (8) Cannot or will not talk.

(9) Unable to stop talking. (10) Shouting or screaming.

(11) Distracted or preoccupied. (12) Will not keep clothes on.

(13) Trying to harm self. (14) Destroying property.

(15) Very depressed. (16) Fighting.

(17) Other inmates report hallucinations. (18) Will not obey rules.

(19) Threatening or hostile. (20) About to "explode".

RECEIVED DEC 13 1991

(21) Other behavior which should be checked by the psychiatric screening team:

Explain: Refused a psy. Ref filled out on 12/6/91 — no response yet as of today.

C. What caused you to observe the inmate's unusual behavior?

Explain: _____

D. What was the inmate doing when you first observed his/her actions?

Explain: _____

E. What problems have you experienced regarding this inmate in the past?

Explain: _____

Classification Deputy contacted: L Foote Date: 12/12/91

Inmate Transferred to: _____ Date: _____
cellblock location

(C)

HARRIS COUNTY SHERIFF'S DEPARTMENT
DETENTION BUREAU

REFERRAL FOR PSYCHIATRIC SCREENING

A. Name: RHOADES, RICK DOB: 5-10-64 SPN: 1001375

Sex: (M) F Race: (W) B H Other: _____ Cellblock: 7B2

Charges/Bond: _____

B. Possible Psychiatric Problems: Circle and explain.

(1)	Is thinking of killing self.	(2)	Very frightened.
(3)	Unusual sexual acts.	(4)	Strange or unusual behavior.
(5)	Very confused.	(6)	Unable to move.
(7)	Unable to keep still.	(8)	Cannot or will not talk.
(9)	Unable to stop talking.	(10)	Shouting or screaming.
(11)	Distracted or preoccupied.	(12)	Will not keep clothes on.
(13)	Trying to harm self.	(14)	Destroying property.
(15)	Very depressed.	(16)	Fighting.
(17)	Other inmates report problems.	(18)	Will not obey rules.
(19)	Threatening or hostile.	(20)	About to "explode".

(21) Other behavior which should be checked by the psychiatric screening team:

Explain: Patient says that he had been under psychiatric care & was Dx Schizophrenic & was given Elavil & Xanax. He feels he need to talk to a psychiatrist

C. What caused you to observe the inmate's unusual behavior?

Explain: _____

D. What was the inmate doing when you first observed his/her actions?

Explain: _____

E. What problems have you experienced regarding this inmate in the past?

Explain: _____

Classification Deputy contacted: _____ Date: _____

Inmate Transferred to: _____ Date: _____
cellblock location

12-3-91 8:25 AM
date time

RIS COUNTY SHERIFF'S DEPARTMENT
DETENTION BUREAU

RRAL FOR PSYCHIATRIC SCREENING

ides, Rick DOB: 5-10-64 SPN: 1001375

Race: (W) B H Other: _____ Cellblock: 7B2-C

d: _____

chiatric Problems: Circle and explain.

nking of killing self.	(2)	Very frightened.
al sexual acts.	(4)	Strange or unusual behavior.
confused.	(6)	Unable to move.
to keep still.	(8)	Cannot or will not talk.
to stop talking.	(10)	Shouting or screaming.
cted or preoccupied.	(12)	Will not keep clothes on.
to harm self.	(14)	Destroying property.
epressed.	(16)	Fighting.
mates report problems.	(18)	Will not obey rules.
ring or hostile.	(20)	About to "explode".

NIC

RECEIVED DEC 11 1991

behavior which should be checked by the psychiatric screening team:

inmate is thinking of hurting himself and sometimes but hurting others

you to observe the inmate's unusual behavior?

disturbance caused by Inmate Rhoads on 12-5-91

inmate doing when you first observed his/her actions?

Kicking his door

s have you experienced regarding this inmate in the past?

bent mood swings

Deputy contacted: Dep. Rodriguez Date: 12-6-91

ed to: _____ Date: _____
cellblock location

2020 David A. Ritchie Inmate/Jailer

Mental Health and
Mental Retardation
Authority of Harris County

DG-2-B

Client Diagnostics

Rev. 5/88

Last Name/Suffix: Rhoades

Client ID:

First Name: RICK

Local Case Number: 113014

Middle Name: ALLAN

Component/Location: 280 A206

Action: Add: [X] Change: [ ] Delete: [ ]

Decision Date (MM/DD/YY): 12/12/91

Reason for Action: 1 (1 = Admission 2 = Reevaluation 3 = Death)

Principal Diag. Axis: 1

AXIS I	Level 1	Adjustment Disorder, NOS 30990
	Level 2	
	Level 3	
	Level 4	
	Level 5	
	Level 6	
AXIS II	Level 1	no DX V7109
	Level 2	
	Level 3	
	Level 4	
AXIS III	Level 1	none reported / known
	Level 2	
	Level 3	
	Level 4	
	Level 5	
	Level 6	
	AXIS III Date (MM/DD/YY): __/__/__	

AXIS IV: 3

AXIS V: Current 39 Past Year 49

ABL: Current ___ Potential ___

Primary AAMD: ___ Secondary AAMD: ___ Tertiary AAMD: ___

Genetic: ___ Cranial Anomaly: ___ Sensory Impairment: ___

Perception: ___ Convulsive Disorder: ___ Psy Impairment: ___

Motor Dysfunction: ___ AAMD Date: __/__/__

IQ Score: ___ IQ Test Date: __/__/__ IQ Test Type: ___

SQ Score: ___ SQ Test Date: __/__/__ SQ Test Type: ___

Completed By: [illegible] Date: 3-18-92

EXHIBIT FOR BILL OF EXCEPTION

STATEMENT TAKEN FROM JENNIE M. NORTON ON 1/4/83 BY DEPUTY JAN CLIFTON OF THE HOLT COUNTY SHERIFF'S DEPARTMENT

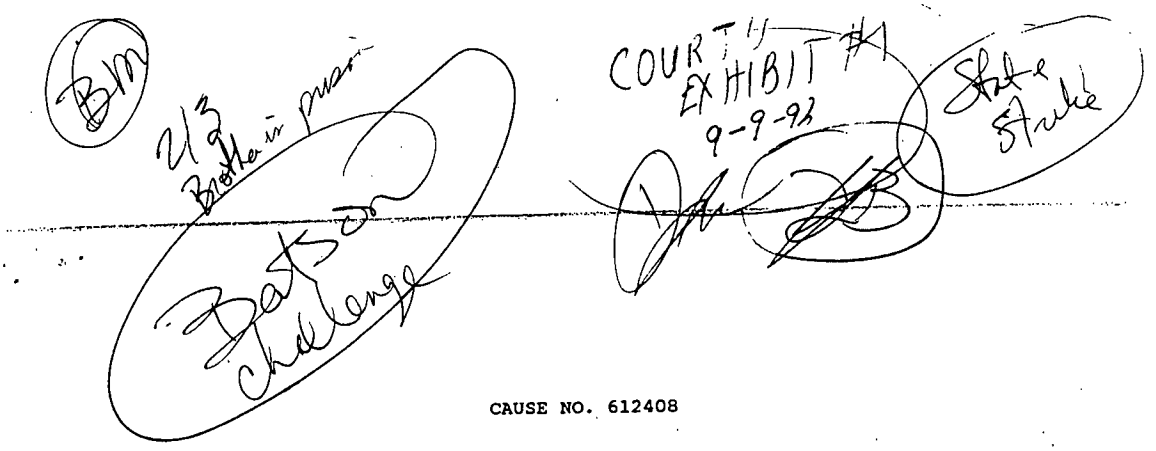
INFORMATION ON JENNIE M. NORTON
ADDRESS: 1407 ROBIN ROAD VALPARAISO,INDIANA
MOTHER: MARGARET NORTON
DOB: 1/14/67
HEIGHT: 5'7"
WEIGHT: 160
HAIR COLOR: BROWN
EYE COLOR: BROWN

Rick and Scott picked Eileen and I up at my house 12/30/82. We asked them if we could go with them. I didn't know Scott(Karpenter) but I had known Rick(Rhoades) for about one week. I met him skating at Chesterton. We stopped somewhere in Illinois at someone's house that Rick knew and stayed all night. We went to Des Moines,Iowa and slept in the car. We went to a white house on a back road,I don't know where it was. We got stuck in the snow. Rick and Scott said they were going to the house to see if anyone was home. They told us to stay in the car but we went with them anyway. We went into the house. Rick and Scott were already in the house. Eileen(Weber) and I took some food and guns. The boys told us to wait until they got the car out, but they had a different car. We left again and went to Mound City and slept in the car again. It was about 7 to 7:30PM when we got the car and guns. I saw two rings. I think Rick gave them to Eileen. One of the boys said the rings came from the house.

The original statement was signed by Jennie Norton
Also signed by Deputy Jan Clifton at 12:15PM on 1/4/83
Jennie Norton was read the Miranda Warning at 12 noon on 1/4/83

We tool a gasoline can from a blue, I think, Dodge pickup in Mound City. Scott took the can.
**Additional statement was given and signed by Jennie.

COURT'S EXHIBIT 1



CAUSE NO. 612408

THE STATE OF TEXAS	$	IN THE 179TH DISTRICT COURT
VS.	$	OF
RICK ALLAN RHOADES	$	HARRIS COUNTY, T E X A S

JUROR QUESTIONNAIRE

The information which you give in response to this questionnaire will be used only by the Court and the lawyers to select a qualified jury. The attorneys are under orders to maintain the confidentiality of any information they learn in the course of reviewing these questionnaires.

NAME: Gregory C. Randle
JUROR NO: 231

INSTRUCTIONS

Please answer each question below as completely and as accurately as you reasonably can. Your complete written answer will save a great deal of time for the judge, for the lawyers, for the other jurors, and for you.

You are expected to sign your questionnaire, and your answer will have the effect of a statement given to the Court under oath. What is needed is your very best, honest effort to answer the questions contained in this questionnaire.

The sole purpose of the questionnaire is to encourage your full expression and candor so that both the prosecutor and the defense will have a meaningful opportunity to select a fair and impartial jury to try the issues of the case. If this highly important objective of selecting a fair and impartial jury is not achieved, the balance of the proceedings become meaningless. Your full cooperation is of vital importance.

You are instructed not to discuss these questions or your answers with anyone until questioned by Judge Mike Wilkinson.

Mike Wilkinson, Presiding Judge
179th District Court
Harris County, Texas

PLEASE PRINT LEGIBLY

JUROR NO. 23

1. FULL NAME: Gregory Carl Randle

2. IN WHAT PART OF THE CITY OR COUNTY DO YOU LIVE? Northwest Harris County

3. HOME ADDRESS: 11959 Medicine Bow Circle Houston, Tex 77067

4. WORK ADDRESS: 44 44 Center Houston, Texas

5. PRESENT MARITAL STATUS:
SINGLE ___ MARRIED ✓ SEPARATED ___ DIVORCED ___ WIDOWED ___

6. YOUR AGE: 35 DATE OF BIRTH: 2-3-57

7. BIRTHPLACE: Houston, Texas

8. YOUR EMPLOYER: Coffer Corporation

9. LENGTH OF EMPLOYMENT: 12 yrs

10. JOB DUTIES OR TITLE: Machinist
WHAT DO YOU LIKE MOST ABOUT YOUR JOB? Making things from a blue print and being able to see the finished product
WHAT DO YOU LIKE LEAST ABOUT YOUR JOB? burns & cuts from flying metal chips

11. OTHER THAN YOUR PRESENT OCCUPATION, WHAT OTHER TYPES OF JOBS HAVE YOU HAD? restaurants, County parks during Summer.

12. HOW LONG HAVE YOU LIVED IN HARRIS COUNTY, TEXAS? 35yrs

13. WHERE HAVE YOU LIVED BESIDES HARRIS COUNTY, TEXAS? (LIST PLACE OF RESIDENCE AND WHEN YOU LIVED THERE) N/A

14. SPOUSE'S NAME: Karen Randle
AGE: 33

15. SPOUSE'S BIRTHPLACE: Kennard Texas

16. SPOUSE'S EMPLOYER: BANK One
LENGTH OF EMPLOYMENT: 12 yrs

17. OTHER THAN YOUR SPOUSE'S PRESENT OCCUPATION, WHAT OTHER TYPES OF JOBS HAS HE OR SHE HAD: None

JUROR NO. 23

18. PLEASE LIST YOUR CHILDREN AND REQUESTED INFORMATION:

NAME	SEX	AGE	SCHOOL OR EMPLOYMENT
Gregory Jr.	M	12	Aldine ISD
Tiffany	F	13	Wells Middle School
Renisha	F	10	Aldine ISD
Shannon	M	7	Aldine ISD

19. WHAT HOBBIES OR ACTIVITIES DO YOU ENJOY? fishing
Drawing, bowling

20. WHAT HOBBIES OR ACTIVITIES DO THE OTHER ADULTS IN YOUR HOUSE ENJOY? fishing, bowling

21. WHAT IS THE HIGHEST GRADE YOU COMPLETED IN SCHOOL? 12th

COLLEGE? 2 yrs

POST GRADUATE? _____

NAME OF HIGH SCHOOL: M.B. Smiley
GRADUATE? YES (_____) NO (_____)

FAVORITE SUBJECTS: History, Science

LEAST FAVORITE SUBJECTS: Math

IF YOU ATTENDED SCHOOL AFTER HIGH SCHOOL, PLEASE DESCRIBE THE TYPE OF SCHOOL AND YOUR MAJOR COURSE OF STUDY, INCLUDING TRADE AND TECHNICAL SCHOOL AND COLLEGE COURSES: _____

San Jacinto Jr college
Electronics - Air Conditioning & Refrigeration

JUROR NO. 23

22. HAVE YOU EVER RECEIVED ANY TRAINING IN THE LAW?

YES (_____) NO (✓),

IF YES PLEASE DESCRIBE: _____

23. HAVE YOU OR ANY MEMBER OF YOUR FAMILY OR CLOSE FRIEND HAD A BAD EXPERIENCE WITH A WEAPON? NO
IF YES, PLEASE DESCRIBE _____

24. DO YOU BELIEVE THAT THE CRIMINAL LAWS OF THE UNITED STATES AND THE STATE OF TEXAS RELATING TO CRIMINAL DEFENDANTS ARE TOO LENIENT?
YES (_____) NO (✓) NO OPINION (_____)
IF YES, EXPLAIN: _____

25. DO YOU BELIEVE THAT THE LAWS OF THE UNITED STATES AND THE STATE OF TEXAS RELATING TO CRIMINAL DEFENDANTS ARE TOO HARSH?
YES (_____) NO (✓) NO OPINION (_____)
IF YES, EXPLAIN: _____

26. DO YOU HAVE ANY DIFFICULTY WITH VISION OR HEARING, OR ANY OTHER DISABILITY THAT WOULD MAKE JURY DUTY A HARDSHIP FOR YOU? NO

27. HAVE YOU OR YOUR SPOUSE SERVED IN THE MILITARY? INDICATE BRANCH,LENGTH OR SERVICE, DATE OF SEPARATION, TYPE OF DISCHARGE, COMBAT DUTY, RANK OR GRADE HELD, GENERAL DUTIES, PLACES OF SERVICE: NO

JUROR NO. 23

28. HAVE YOU, A FAMILY MEMBER, OR A CLOSE FRIEND EVER BEEN INVOLVED IN A CRIMINAL CASE AS A DEFENDANT, VICTIM, WITNESS, OR COMPLAINANT? YES (✓) NO (_____)
IF YES, PLEASE DESCRIBE: Brother was A defendant

29. HAVE YOU, A FAMILY MEMBER, OR A CLOSE FRIEND EVER BEEN ARRESTED FOR OR CHARGED WITH AN OFFENSE ABOVE THE LEVEL OF A TRAFFIC VIOLATION? YES (✓) NO (_____)
IF YES, PLEASE DESCRIBE: My Brother was arrested

30. ARE YOU PRESENTLY UNDER INDICTMENT OR LEGAL ACCUSATION FOR ANY MISDEMEANOR OR FELONY? YES (_____) NO (✓)

31. RELIGIOUS PREFERENCE (PLEASE STATE DENOMINATION AND SPECIFIC CHURCH YOU ATTEND) Church of Christ

32. CHURCH OFFICES HELD AND ACTIVITIES OTHER THAN ATTENDANCE: None

33. DO YOU NOW HAVE OR HAVE YOU EVER HAD A BUMPER STICKER ON YOUR CAR? YES (_____) NO (✓)
IF YES, PLEASE DESCRIBE: _____

JUROR NO. 23

34. PRIOR JURY SERVICE: CIVIL (___) CRIMINAL (___)
BOTH (___) COURT MARTIAL (___) NONE (✓)

IF CRIMINAL:

	CASE #1	CASE #2	CASE #3
TYPE OF CASE(S):	_____	_____	_____
HOW LONG AGO?	_____	_____	_____
REACH VERDICT?	YES( ) NO( )	YES( ) NO( )	YES( ) NO( )
SET PUNISHMENT?	YES( ) NO( )	YES( ) NO( )	YES( ) NO( )
WERE YOU THE FOREMAN?	YES( ) NO( )	YES( ) NO( )	YES( ) NO( )

IF OTHER THAN CRIMINAL: WHEN: _____
TYPE OF CASE: _____

WAS THERE ANYTHING IN YOUR PRIOR JURY EXPERIENCE THAT EITHER UPSET OR AGITATED YOU? YES (___) NO (___) PLEASE EXPLAIN:

_____

_____

35. HAVE YOU OR YOUR SPOUSE EVER BEEN A GRAND JUROR?
YES (___) NO (✓)

36. HAVE YOU OR ANYONE IN YOUR IMMEDIATE FAMILY EVER BEEN UNDER A DOCTOR'S CARE FOR ANY MENTAL ILLNESS? YES (___) NO (✓)

37. HAVE YOU OR ANY MEMBER OF YOUR FAMILY CONSULTED A PSYCHIATRIST OR A PSYCHOLOGIST? YES (___) NO (✓)

38. WITH WHAT POLITICAL PARTY DO YOU FEEL YOU ARE ASSOCIATED?
Democratic

39. DO YOU CONSIDER YOURSELF A LIBERAL ___? CONSERVATIVE___?
OR MODERATE ✓?

40. WHAT POLITICAL GROUPS, FOUNDATIONS, AND ACTION COMMITTEES DO YOU BELONG TO OR SUPPORT? None

_____

JUROR NO. 23

41. HAVE YOU OR ANY RELATIVE EVER BEEN A MEMBER OF M.A.D.D., CRIME, OR ANY OTHER ~~LAW~~ ENFORCEMENT ORIENTED GROUP?
YES (___) NO (✓) IF YES, LIST: _____

42. IF YOU DO VOLUNTEER WORK, PLEASE INDICATE THE ORGANIZATION AND YOUR INVOLVEMENT none

43. TO WHAT CIVIC, PROFESSIONAL, FRATERNAL GROUPS, OR LABOR UNIONS DO YOU BELONG? none

44. HAVE YOU EVER HAD ANY INVOLVEMENT WITH THE AMERICAN CIVIL LIBERTIES UNION? YES (___) NO (✓)
IF YES, DESCRIBE: _____

45. HAVE YOU EVER APPEARED BEFORE CITY COUNCIL, THE LEGISLATURE, ETC.? YES (___) NO (✓)

46. HAVE YOU EVER WRITTEN A "LETTER TO THE EDITOR"?
YES (___) NO (✓)

47. WHAT IS THE LAST MOVIE YOU SAW IN A THEATER? Alien III

48. WHAT IS THE LAST BOOK YOU READ? ~~the~~ The Encyclopedia

49. WHAT TV SHOWS DO YOU WATCH REGULARLY? Mostly PBS

50. WHAT CABLE TV STATIONS DO YOU SUBSCRIBE TO? NONE

51. WHAT MAKE AND MODEL CAR/TRUCK DO YOU DRIVE? LEXUS ES 250 1990

JURORNO. 23

52. WHAT MAGAZINES AND NEWSPAPERS DO YOU READ REGULARLY?
Hunting & fishing

53. HAVE YOU EVER BEEN A MEMBER OF ANY LAW ENFORCEMENT GROUP, SUCH AS THE CRIME COMMISSION, THE TRAFFIC COMMISSION, OR OPERATION GET INVOLVED, POLICE OR SHERIFF'S AUXILIARY?
no

54. ARE YOU NOW OR HAVE YOU BEEN INVOLVED IN LAW ENFORCEMENT?
no

55. WOULD YOU BE WILLING TO TELL A PEACE OFFICER "NO" IF HE GAVE YOU OR A FAMILY MEMBER WHAT YOU BELIEVED TO BE AN IMPROPER ORDER? YES (✓) NO (___)

56. DO YOU KNOW ANYONE WHO HAS BEEN TO PRISON? YES (___) NO (~~✓~~) IF YES, EXPLAIN: My Brother is now in prison

57. WHAT DO YOU THINK ABOUT THE TEXAS PRISON SYSTEM? needs Reforms

58. DO YOU FEEL THAT THE TEXAS DEPARTMENT OF CORRECTIONS SERVES THE PUBLIC IN REHABILITATING INMATES? YES (___) NO (✓)

59. HAVE YOU OR ANY FAMILY MEMBER BEEN ASSOCIATED OR WORKED WITH ANY PROGRAM DEDICATED TO REHABILITATING PERSONS CONVICTED OF CRIME? YES (___) NO (✓)

IF YES, EXPLAIN: _____

60. DO YOU BELIEVE THAT CERTAIN KINDS OF PEOPLE ARE MORE LIKELY TO COMMIT CRIMES THAN OTHERS? YES (___) NO (✓),
IF YES, EXPLAIN: _____

JUROR NO. 23

61. CHECK THE ONE STATEMENT WHICH BEST SUMMARIZES YOUR GENERAL VIEWS ABOUT CAPITAL PUNISHMENT (THE DEATH PENALTY).

____ 1. I AM OPPOSED TO CAPITAL PUNISHMENT UNDER ANY CIRCUMSTANCES.

✓ 2. I AM OPPOSED TO CAPITAL PUNISHMENT EXCEPT IN A FEW CASES WHERE IT MAY BE APPROPRIATE.

____ 3. I AM NEITHER GENERALLY OPPOSED TO NOR GENERALLY IN FAVOR OF CAPITAL PUNISHMENT.

____ 4. I AM IN FAVOR OF CAPITAL PUNISHMENT EXCEPT IN A FEW CASES WHERE IT MAY NOT BE APPROPRIATE.

____ 5. I AM STRONGLY IN FAVOR OF CAPITAL PUNISHMENT AS AN APPROPRIATE PENALTY.

62. ASSUME YOU ARE ON A JURY TO DETERMINE THE PUNISHMENT FOR A DEFENDANT WHO HAS ALREADY BEEN CONVICTED OF A VERY SERIOUS CRIME. IF THE LAW GIVES YOU A CHOICE OF DEATH, LIFE IMPRISONMENT, OR SOME OTHER PENALTY: (CHECK ONLY ONE)

____ 1. I CANNOT VOTE TO ASSESS THE DEATH PENALTY UNDER ANY CIRCUMSTANCES.

____ 2. I AM OPPOSED TO THE DEATH PENALTY BUT COULD VOTE TO ASSESS IT IN A PROPER CASE.

✓ 3. MY DECISION ON WHETHER TO ASSESS THE DEATH PENALTY WOULD DEPEND UPON THE FACTS AND CIRCUMSTANCES OF THE CASE.

____ 4. I WOULD USUALLY VOTE FOR THE DEATH PENALTY IN A CASE WHERE THE LAW ALLOWS ME TO DO SO.

____ 5. I WOULD VOTE TO ASSESS THE DEATH PENALTY IN EVERY CASE THAT I COULD.

63. WHAT DO YOU BELIEVE IS THE MOST IMPORTANT OBJECTIVE OF PUNISHMENT FOR CRIMINAL OFFENSES? (FOR EXAMPLE: DETERRENCE TO OTHERS? REHABILITATION? RETRIBUTION? PREVENTION OF REPEATED BEHAVIOR?)

To deter future Crimes

JUROR NO. 23

64. YOU WILL FIND A NUMBER OF STATEMENTS BELOW EXPRESSING DIFFERENT ATTITUDES TOWARD THE DEATH PENALTY (CAPITAL PUNISHMENT). PLACE A CHECK IN ONE OF THE SPACES NEXT TO EACH STATEMENT INDICATING WHETHER YOU MORE NEARLY AGREE OR MORE NEARLY DISAGREE WITH THE STATEMENT.

AGREE	DISAGREE		
✓		1.	I THINK CAPITAL PUNISHMENT IS NECESSARY BUT I WISH IT WERE NOT.
	✓	2.	ANY PERSON, MAN OR WOMAN, YOUNG OR OLD, WHO COMMITS CAPITAL MURDER SHOULD PAY WITH HIS OWN LIFE.
✓		3.	CAPITAL PUNISHMENT IS WRONG, BUT IT IS NECESSARY IN OUR IMPERFECT CIVILIZATION
	✓	4.	EVERY CRIMINAL SHOULD BE EXECUTED.
✓		5.	CAPITAL PUNISHMENT HAS NEVER BEEN EFFECTIVE IN PREVENTING CRIME.
✓	✓	6.	I DO NOT BELIEVE IN CAPITAL PUNISHMENT, BUT I BELIEVE IT IS NECESSARY.
✓		7.	WE MUST HAVE CAPITAL PUNISHMENT FOR SOME CRIMES.
	✓	8.	I DO NOT BELIEVE IN CAPITAL PUNISHMENT UNDER ANY CIRCUMSTANCES.
	✓	9.	CAPITAL PUNISHMENT IS NOT NECESSARY IN MODERN CIVILIZATION.
	✓	10.	LIFE IMPRISONMENT IS MORE EFFECTIVE THAN CAPITAL PUNISHMENT.
	✓	11.	EXECUTION OF CRIMINALS IS A DISGRACE TO CIVILIZAED SOCIETY.
✓		12.	CAPITAL PUNISHMENT IS JUST AND NECESSARY.
✓		13.	I DO NOT BELIEVE IN CAPITAL PUNISHMENT, BUT I DO NOT BELIEVE IT SHOULD BE ABOLISHED.
✓		14.	CAPITAL PUNISHMENT GIVES THE CRIMINAL WHAT HE DESERVES.
✓		15.	THE STATE CANNOT TEACH THE SACREDNESS OF HUMAN LIFE BY DESTROYING IT.
✓		16.	CAPITAL PUNISHMENT IS JUSTIFIED ONLY FOR PREMEDITATED MURDER.
	✓	17.	CAPITAL PUNISHMENT SHOULD BE AVAILABLE AS PUNISHMENT FOR MORE CRIMES THAN IT IS NOW.

JUROR NO. 23

65. HAVE YOU HAD ANY MEDICAL TRAINING?
YES (___) NO (✓) IF YES, EXPLAIN: _____

_____

66. HAVE YOU TAKEN A COURSE IN PSYCHOLOGY?
YES (___) NO (✓) IF YES, WHEN AND WHERE? _____

_____

67. IS THERE ANYTHING ABOUT YOUR JOB, FAMILY, OR HEALTH THAT WOULD AFFECT YOUR SERVICE AS A JUROR?
YES (___) NO (✓) IF YES, EXPLAIN: _____

_____

_____

68. PLEASE LIST BELOW ANYTHING YOU BELIEVE THE COURT OR ATTORNEYS SHOULD KNOW THAT YOU THINK IS IMPORTANT WITH REFERENCE TO YOUR ABILITY TO SERVE AS A JUROR IN THIS OR ANY OTHER CRIMINAL CASE.

I HEREBY CERTIFY THAT THE RESPONSES AND INFORMATION PROVIDED HEREIN ARE TRUE AND CORRECT.

Gregory C. Randle
JUROR SIGNATURE